

THIS SPECIAL ISSUE HAS BEEN PRODUCED AS THE UNION'S SUBMISSION TO THE SENATE RE: SITE PLANNING REPORTS NUMBERS 1 & 2, 1972 PRODUCED BY THE UNIVERSITY ARCHITECT.

COMPROMISE = CONFUSION

6.01

If the university is a centre for the advancement of learning and the dissemination of knowledge then the ideal university fabric should aim to maximise accessibility between its constituent parts so that a continuous teaching environment is created. The physical form resulting should allow cumulative growth and internal change while maintaining a compact and coherent layout. In order that the academic centre may remain a recognizable entity in any university it is essential to develop this area as intensively as possible.

6.02

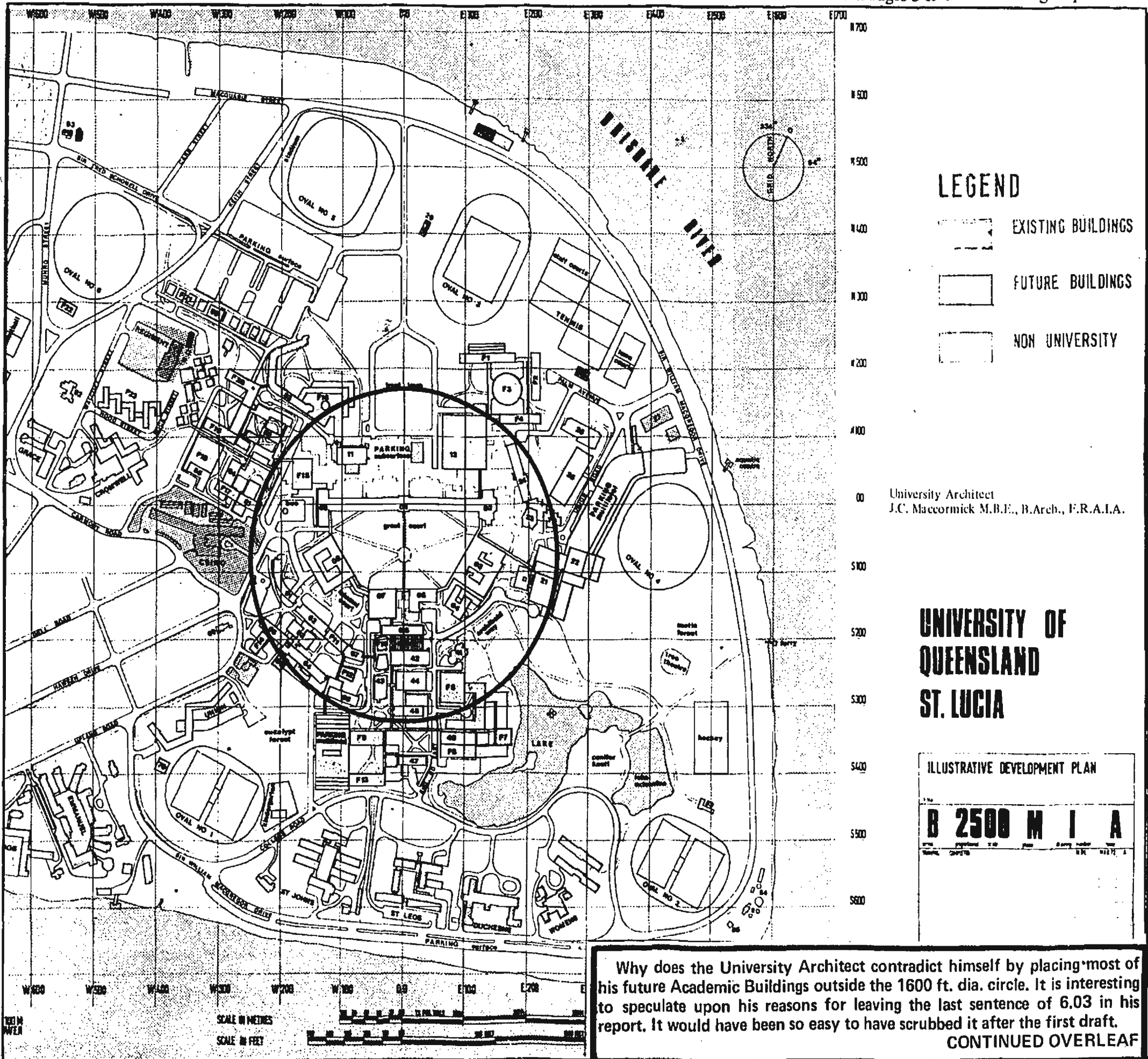
In terms of space and time, definite limits exist which determine the optimum size of the academic centre, derived from the walking distance between any two teaching facilities and the time allowed for changing classes. If a ten minute change-over period is allowed, five minutes of which is taken up in getting out of one building and into another, and the remaining five minutes in walking at an average minimum speed of 2 mph, the maximum distance between the entrances of any two academic buildings on campus is given as 880 feet. Other factors such as terrain, circulation design inside and pathway systems outside buildings may also affect the

diameter of the central campus, but university planners elsewhere generally accept a figure of 1600 feet⁽¹⁾ containing approximately 46 acres (2 million square feet) of land.

6.03

It is apparent that such compactness necessary for the convenient movement of staff and students from place to place on timetable schedules, though desirable, may not be possible in an existing institution where activities are dispersed due to site impediments, earlier planning decisions, or allocation of distinctive areas of land to separate departments. As land in the academic centre is a finite and highly important resource, it ought to be used as intensively as possible and planning should aim at building up the density of the centre to reduce the peripheral spread wherever possible. There may be a view that related departments comprise a self-contained zone out of which few "cross campus" trips are generated, and therefore the spread of the built-up area is not a cause for concern. This may be true of some areas at the present time, but such a watertight view assumes no future academic changes, an untenable solution when the long term future of the campus is being considered.

— from Pages 3 & 4 Site Planning Report No. 2



Continued from previous page

At a meeting of Buildings and Grounds Committee in April of this year the Union's representatives (Paul Abernethy and Michael Leo) recommended:

"that the 1600 ft. diameter limit be accepted as defining the limits of further site allocation for academic purposes."

At that meeting; to counter the Unions argument that most future development was proposed outside the 1600 ft. ring; senior members of the Administration explained that this concept was not relevant, as three overlapping circles centered on the Duhig Library, the Engineering Admin and the proposed Biological Sciences Library created 3 zones of related disciplines. Each zone would have its own central library, refectory and parking facilities, and walking distances in each zone would be within the 1600 ft. limit.

If this is the case then the Editorial Committee cannot understand why Site Planning Report No. 2 divides the campus up into five precincts (North, Central, South, West and East). Why did the University Architect's Report ignore the fact that this University is progressing towards becoming 3 functionally discrete zones. By failing to explicitly delineate a 3 precinct plan, the Administration was saved the embarrassment of admitting that the actual proposal is for a multiversity not a University.

Accordingly the Union recommends to Senate that it:

Realize the damage that physical sprawl does to the concept of inter disciplinary studies and also

That the 1600 ft. limit be accepted as defining the limits of further site allocation for academic purposes.

As an addendum to the above it is interesting to note the minutes of the Buildings and Grounds Committee of April this year.

The meeting then considered Draft Recommendation 2 which was as follows:

RECOMMENDATION 2

Report No. 2 defines problems and solutions and was submitted to assist members of Buildings and Grounds and the Senate in their deliberations as to short term and long term planning goals. It defines problems to be faced and suggests various alternatives that are available to solve these problems. The Committee recommends the acceptance of the principles contained within this report as a basis for future planning.

Mr. Leo said that the recommendation in its present form was too broad and that any statement of this type should list the principles themselves. The meeting agreed and deferred the matter until the other recommendations were discussed.

What happened later was that the recommendation was allowed to lapse. It would have been very convenient to the Administration to arbitrarily select "principles contained within this report" whenever they wished to justify any particular action. However it is logical to assume that if the University Architect had to list his principles he would be bound to include the one found in 6.01 - 6.03 (i.e. the necessity of compactness and the 1600 ft. limit).

ACADEMIC GOALS AND THE MASTER PLAN

A motion of Union Council on the 31st of August, reads:

"That the Senate, given its inability to state future goals and objectives, must co-ordinate a University-wide examination, by all the University community, of our future academic structure."

REFERENCE Fig. 7.7 "The Nature of the Planning Process" in the Introduction to Site Planning Report No. 1. The first step is stated "Goals and objectives are formulated, leading to a statement of principles upon which the plan must be based". As the University Architect shows on the front cover of his second Report, Step No. 1 was not provided by the Senate; AN OMISSION WHICH INVALIDATES THE PLANNING PROCESS USED.

INTRODUCTION

Administration's common practice is to complain that in order to make any improvements the University should have more money which has apparently always been inadequate.

This is a nonsensical argument because its underlying assumption is that an improvement is nothing else but an increase in physical terms i.e. the number of buildings, their size and the number of students. It should be emphasised that, at this stage, these are of secondary importance and improvements, if any, are of the qualitative nature. This is indicated by the proposed objectives. What is required is first the candid admission that the problems exist and second the intellectual maturity and self criticism. While the former has timidly been recognised by the present Administration, the latter, it is submitted, is sadly lacking.

These objections to the proposed Master Plan had to be prepared in an extremely limited time. Had the preparers of the Master Plan done what they should have done there would have been no need for this task. Because of the time available we have been unable to do more than point out some of the main areas that the Master Planners should have tackled but didn't. It now remains for the Master Planners to make good what they have failed to do and this submission is meant to help them begin that task.

The University is, presumably, concerned with the best deployment of the limited resources available to it. Therefore, it is clear that before it is possible to proceed in a rational way with the preparation of a physical development plan for the University site at St. Lucia it is first necessary to formulate as clearly as possible the aims and objectives of the University over the next decade. Such a task is logically prior to the preparation of a physical development plan: without having undertaken it there is little sense in referring to the two reports on site development as constituting a "plan for the University".

As far as one can tell, the site planners have baulked the task of thinking out and formulating clearly the objectives the University is likely to or should pursue in the foreseeable future. Apart from such vague observations as: "It can be anticipated that this centre will continue to expand to eliminate existing accommodation inadequacies,

and to cope with a continuing growth in enrolments" there is nothing in the Site Plan to indicate that the planners have done any serious thinking about the academic presuppositions underlying their proposals for the physical development of the St. Lucia site.

CRISIS - PRESENT DEFECTS

In the last decade the number of students increased from 8,700 in 1960 to 17,130 by 1972 (or 96.9%). During the same period the number of full-time staff members from Lecturer upwards increased from 310 to 693 (or 123.5%). The ratio of students to Lecturers in 1972 is 25:1. In order to remedy the situation and to stem the alarming alienating tendency between the staff and students, the University Administration has hurriedly stepped up the recruitment of Tutors. In 1960 the number of permanent and temporary Tutors was 106 and 25 respectively. By 1972 these were 280 and 808. While the individual academic quality of a Tutor is not questioned, in many instances final year honours students are engaged on a temporary basis. In addition, very few Tutors have any prior teaching experience at this or other Universities. The fact that the liaison between the Tutors and the lecturing staff is loose indicates a continuing tendency of alienation between the staff and students. It follows that the teaching crisis at the University of Queensland has been solved on the cheap by drastically reducing the quality of teaching, and the students get the raw deal. This tendency is enhanced by the physical inability of some Professors to communicate with their staff and students because of the bureaucratic decision-making machinery in which they have to participate. Thus in 1971 alone there were over 100 Committees of the Professorial Board and the Senate with over 780 sittings. If the average duration of a Committee sitting be four (4) hours and the average membership of a Committee be four (4) Professors, then the total number of hours in Committee sittings by Professors is 12,480. In 1971 the number of Professors was 78, hence the number of hours in Committee sittings per Professor is 160.

This is an alarming situation which is characterised by a complete alienation of some Professors from their staff and students. When this is combined with the watering down of the quality of teaching and in most instances irrelevant decisions made by the alienated decision-making body, the acuteness of the crisis is patently obvious. The University Administration has therefore failed to meet its obligations to its students and to the community at large.

This conclusion is also confirmed by the recent decision of the Professorial Board to reconstruct its composition but, apparently, without reference to the reconstruction and streamlining of its procedures. The whole dilemma concerning the reconstruction of the Professorial Board is: Should the Professorial Board be enlarged by 12 or 30 non-Professorial members of the staff, given the seriousness of the crisis, the dilemma itself is obviously childish but the philosophy of the strategy rather conniving. It is very obvious that

the Professorial Board intends to retain Professorial domination of this University's Academic Life.

CRISIS - SOLUTION

The question to be posed is: What are the reasons, if any, for the current acute crisis at the University of Queensland? Without a detailed study to compile the data one would postulate the following reasons: First, the lack of co-ordination and organization; second, a complete absence of worthwhile objectives and planning; and third, lack of consultation with the University community.

These must undergo a complete reversal to ensure our aims. No worthwhile institution could function with any success without objectives. These, however, should not be colourful 'catch slogans' they should be a set of plausible and attainable goals. Actually these are the aspiration levels that ensure a harmonious relationship of the various sections in the institution and a continuous improvement in the well being of the majority.

To ameliorate this situation it is imperative that the future academic goals be examined and the necessary policies formulated with respect to

1. Optimum Communication between members of the academic community (i.e. students and staff) and whether this should be by:

(a) Small group discussion, as in tutorial systems, or task and collaboration, or other means within small groups.

(b) By retention of formal lectures to large groups of students.

(c) By combinations of various teaching methods, e.g. using audio-visual aids plus tutorials.

2. The Optimum Size of this University - whether restrictions should be placed on the growth of student numbers; (the implications of large numbers as regards better Library facilities, a more stimulating intellectual environment, etc., weighed against the difficulty in communicating with increased numbers of students, and the physical limitations of the University community.

3. Types of Courses to be offered in the future. This examination of academic goals must be given priority over designing the physical site plan - i.e. the plan must be devised to fit the academic goals rather than to centre on accommodating cars.

It is not satisfactory to prepare a Site Plan, and then fit the future development of this University into that site. The relationship between this University and other existing and possible educational developments needs to be locked into. We have in mind here not merely the Griffith University and the Colleges of Advanced Education, but also the development of new institutions such as:

Open Universities
Adult Education Institutions
Worker Educational Institutions
Black Studies Institutes
Women's Studies Institutes
Peace and Justice Studies and other
Institutes separate from the University
A Television University.

a petit versailles for the sun king of st. lucia

"This new axial approach is not proposed as a circulating road giving access to other parts of the campus. Its primary function would be to provide a ceremonial and visitor approach to the Forgan Smith Building and Mayne Hall, and in this regard it would become the popular sightseeing attraction for the visiting public."

8.03.01 P.31
Site Planning Report No. 2, 1972

The proposed planning of this area as shown on G.2500 M.I.A. Page 10 and M.I.A. Page 29 of Site Planning Report 1972 is opposed for the following reasons.

No. 1(a) "The imposition upon the landscape of an axial service road and vista is based on an outdated baroque planning concept (both in aesthetic and philosophical terms)".

The original radial plan for this campus is an excellent memorial of the Classical Revival which occurred in European architecture in the 19th Century. This classical eclecticism, derived second-hand from the Renaissance period, in its attempt to evoke the glory that was Rome - and Athens, emphasized the aesthetic sterility that marked the decline of the European empires. An even more unfortunate indication of Queensland's lingering colonial consciousness is shown by the fact that it was designed in 1935, well after the introduction of the "Modern Movement", whose functional purity made ridiculous the atavistic fantasies of Classical Revivalism, Romanticism, and the Ecole des Beaux Arts.

The following quotations are intended to explain the invalidity of baroque axiality for Queensland University in 1972, and the reader is invited to draw analogies from the following.

"Long before the invention of bulldozers, the Italian military engineer developed a bulldozing habit of mind - In the interests of mechanical efficiency and outward aesthetic conformity, the engineer ignored the social structure of the city and in his efforts to accelerate traffic, he impeded the meeting and co-operation of those whom the traffic supposedly served."

These baroque clichés of power - lingered right into the twentieth century. Where the original baroque terms still prevailed, this type of planning might still have some justification, thus a short and symbolically appropriate avenue connects the Admiralty Arch with Buckingham Palace in London, while the crest above is lined with foreign embassies. But elsewhere such plans, which their administrators still suppose to be 'modern' merely repeat the social ineptitudes of princely power."

The asterisk plan was, in fact, an original baroque contribution though - it first occurred as a satiric suggestion in Aristophanes. Whatever else the baroque plan stood for it signified the military conquest of space; the human results were not taken into account, except insofar as they conspired to the advantage of the upper classes."

The subordination of the contents of urban life to the outward form was typical of the baroque mind; but its economic costs were almost as extravagant as its social losses. If the topography was irregular, the terrain must be evened out merely in order to make the plan work."

Unfortunately baroque planners tacitly assumed that their order was eternal. They not merely regimented space but they sought to congeal time. Their ruthlessness in clearing out the old was equalled only by their stubbornness in opposing the new."

Lewis Mumford "The City in History". (Note: this is regarded as the basic textbook on the history of urbanisation.)

"Baroque axial concept is based on a single movement system represented by simultaneous multiple planes receding in space to a single vanishing point and realized by movement along a single axis - In fact human spatial experience is omnidirectional and occurs naturally as multiple path movement - The ordered geometrical forms - Symmetrical patterns radiating from a centre, were suited to the early Renaissance concept of the individual-centred world. But where we are concerned with the experience of the total city and its interrelationships over a long span of time and growth, these forms are not suitable."

Bacon "Design of Cities". It can also validly be said that if Renaissance culture expressed humanity's control of nature, Renaissance planning expressed the autocrats control of humanity; the princes palace or military tower was often placed at the centre of the radial plan.

No. 7(b) "The imposition upon the landscape of an axial service road and vista is based on an outdated baroque concept, and nevertheless is inconsistent with the actual asymmetrical massing of buildings in the North Precinct".

Even if one is not swayed by the above criticism of baroque order, it is a fact that baroque order no longer exists north of the Forgan-Smith building.

"In short, a baroque plan was a block achievement. It must be laid out at a stroke, fixed and frozen forever. Such a plan demands an architectural despot, working for an absolute ruler, who will live long enough to complete their own conceptions. To alter this type of plan, to introduce fresh elements of another style, is to break its aesthetic backbone."

Lewis Mumford, "The City in History".

Forced by the historical growth of the campus to site buildings north of the Forgan-Smith building, Professor Roberts recommended a strengthening of the original architectural concept, as described on Page 33 of "Observations on the Future Development of the Campus".

"The open court, enclosed on three sides became an established motif in baroque designs that carried over into later construction."

Camillo Sitte.

However the buildings, both existing and proposed, in the North Precinct do not exist as an axially symmetrical arrangement, and any attempt to resurrect an axial vista in the Baroque style is unrealistic.

"We have destroyed the greatness of the Main Building."

Professor Mahoney 6.4.72.

Also at the meeting of the 6th April Mr McCormick, when discussing the North Precinct referred to an "asymmetrical approach to planning on either side of the Main Building", and to the Mayne Hall as a secondary focus.

Since any baroque planning which utilizes an axial approach relies on it being flanked by subordinate buildings or formal landscaping and tree planting, to produce a rhythmic progression as the observer towards the central focal point, then the proposal found in Site Planning Report No. 2 can be regarded as a failure.

Continued overleaf

No. 2 "it precludes the utilization of the area north of N.100 for other University purposes".

Acceptance of the zonings for the area north of N.100 as shown on G.2500, M.I.A. (page 10) is undesirable at this point in time; when the future demands for campus land have not been fully appreciated.

Mr McCormick illustrates in Fig. 1.1 "The Nature of the Planning Process" the fact that the goals and objectives related to growth and change in the academic process were not yet stated by the University.

Buildings and Grounds Agenda 6.4.72.

The fourth University built in Queensland will most probably be an "open Uni," its education occurring by television broadcast, and logically will be designed to 'plug-in' to the existing facilities of Queensland University. No more symbolically relevant site could be found for its studio and office block than astride the main axis confronting the Forgan-Smith building across the Ceremonial Court.

(N.B. Senate approved on 18.12.69 that "suitable buildings may be erected in front of the main building.")

That there currently exists a shortage of land for University purposes cannot be doubted, since on 9.12.72 a Senate sub-committee recommended the provision of on-campus land for a further student housing project. The Senate resolved—

"that the Senate cannot support the allocation of land on the campus since campus land is in short supply, as well as there being a shortage of space for academic and associated purposes." "Part of the problem facing campus designers now and in the future is — how to make best use of the available space in the interests of the University community".

Professor Roberts "Observations on the Future Development of the Campus."

It should surely be obvious that the maintenance of an axial vista cannot be regarded as being of high priority. Whilst preservation of what they believe to be the original concept is prized by some of the senior members of the University community, we must remember that the site and its buildings are primarily a part of an educational process, and must adapt to meet changing conditions.

Returning to Professor Roberts—
"the main facade of the University, extending from the Library to the new Western Arts Block is a fine architectural composition in the classical tradition. Its length however is such that it is doubtful whether retention of the open space necessary to provide a proper setting for a facade of this length is justified and capable of being sustained in view of the pressures for accommodation now confronting the University."

Since the Senate has approved of this concept, it is also logical to state that—

"the proposal for a main axial vista extending from the Main Tower to the river is a civic design concept in the classical tradition. Its length, however, is such that it is doubtful whether retention of the open space necessary to provide a proper setting for a vista of this length is justified and capable of being sustained in view of the pressures for accommodation now confronting the University."

No. 3 "the proposal is inconsistent with the vehicular and pedestrian movement patterns of the original Hennessey and Hennessey plans for the campus".

Plans 2 and 5 of "A Review of the Planning of the St. Lucia Campus" prepared by the University Architect in June, 1971 show that the vehicular approach to the main entrance occurred in two phases. Firstly a diagonal approach to either end of

the Forgan Smith building, and then along Front Drive parallel to the main facade whose dominant verticals would produce a rhythmic progression. (As previously stated, this is a basic baroque device).

Additionally the original architects intended that a formal pedestrian walk be laid out along the main axis in front of the Forgan-Smith building. Bearing these factors in mind, it becomes obvious that an axial approach was deliberately avoided by Hennessey and Hennessey, probably because of its symbolic and aesthetic shortcomings.

No. 4 "the proposal is inconsistent with the emphasis placed on 'the re-creation of a pedestrianised campus' (7.03.02)."

If it is felt desirable to emphasize the main axis by some means, then a pedestrian walk running from the Tower along "00" down to a sculptural feature placed at its intersection with the axis of Sir Fred Schonell Drive seems a much more worthwhile solution. From this point a further pathway past the sports pavilion to the boatshed creates a continuous promenade from the Tower to the riverbank.

No. 5 "the proposal is inconsistent with the emphasis placed on — the development of buildings enclosing courtyards (7.07.03). In particular, it diminishes the coherence of the proposed ceremonial court."

One of the basic elements of urban planning is the public square. From those found in Europe, several characteristics which contribute to a successful design can be extrapolated namely—

- (i) the idea of continuous enclosure
- (ii) the emphasis placed on a particular building (usually a church or hall) by placing it wholly or partially within the square.
- (iii) subordination in scale of other enclosing facades to the major monumental element (usually a tower).
- (iv) irregular, asymmetrical plan form (as a result

of historic growth).

(v) a harmonic relationship between the height of the major monumental element and the depth of the square.

"All of these above-mentioned architectural forms in former times made up a complete system of enclosing public squares. Today there is a contrary tendency to open them on all sides — wherever these openings have been made the cohesive effect of the square has been completely nullified".

Camillo Sitte "The Art of Building Cities".

It is recommended that the principles declared above be utilized to create a far more pleasing ceremonial court than the one proposed: i.e. that future buildings to the north of the Forgan Smith building enclose both the ceremonial court and the Mayne Hall; and by being of small scale allow the Tower to dominate the whole composition. It will still be seen from the ring road and act as a beacon marking the centre of the University.

(A proposal to place a building directly north of the Tower has already been unsuccessfully presented by the University Architect).

In addition; the access road could approach the Tower either diagonally from east or west as originally intended.

A further development of the overall concept would involve the creation of a series of courts (in the Oxbridge tradition) running from the Forgan Smith building even as far as the river.

(Alternative plans, expressing the concepts shown above, are located on the back page.)

(Accordingly the Union recommends to Senate)

"that given the apparent wastage of land along the main axis north of N 100, the proposal for a symmetrical axial road be re-examined."

(This motion was put to Buildings and Grounds earlier this year and lost by a small majority. Owing to its importance we urge a recommitment).

Sonnet to the University

When forty bulldozers besiege thy brow
And dig deep trenches in thy beauty's field,
Thy front lawn's livery, once proud, is now
A dirty tattered weed, of small worth held.
Then being asked where all thy beauty lies,
Where all the glory of thy bygone days,
If we must say, in planners' glib replies
And future car-parks, 't were but thriftless praise.
Thriftless indeed, since thrift is out of use,
Bursting and devastating our whole line,
No limit placed to limitless abuse,
Not even Great Court safe from base design.
Senates may seal such desecrations bold,
But we'll remember how thou looked of old.

— by the ghost of the Bard
W.S.

"The ivied walls of academia"

Senates statement that any future development must "recognize the permanent quality and historic importance of the original buildings," becomes a limitation preventing any planner from satisfying

"academic and fiscal requirements... and... the inevitable changes inherent in an institution of higher education"

9.03 Site Planning Report No. 2
Of what "permanent quality" is the Forgan-Smith building with its endless corridors and tiny windows? Why are senior employees of this University so reluctant to move the administrative offices back to the centre of the campus? No contemporary architect sacrifices functional efficiency to external massing effects. We should learn from the errors of the past not glorify them.

What of the "historical importance" of the original radial plan, based on, eclectic 19th century classical revival theories.

An even more unfortunate indication of Queensland's lingering colonial self-consciousness is shown by the fact that it was designed in 1935; well after the introduction of the "Modern Movement" (Mies, Gropius, Corbusier et al), whose functional purity made ridiculous the outdated atavism of Classical Revivalism, Romanticism, and the Ecole des Beaux Arts.

While many senators may not agree with these criticisms they should be prepared to undertake the following self analysis:—

Is it in the best interests of this University community to allow the existing buildings to inhibit the educational processes of the next decades? What is more important an organization which functions efficiently or a museum where the artifacts are more important than the people.

Accordingly the Union recommends to Senate—that further (high rise) development be fostered immediately adjacent to the original "D" in order to maintain a compact pattern of development.

STUDENT HOUSING

Union Council, at its meeting of the 31st August, 1972 carried a motion —

"that this Council approves the schematic proposal prepared by James Birrell and Partners for a housing project for 100 students on Carmody Creek Road and recommends that it be forwarded to the Senate via the Senate "Student Housing" Committee".

Accordingly, the following description of the housing situation is not part of the Union's submission on the Master Plan. It has been included as an explanation of your Union's efforts in this field.

PREAMBLE

As scrutineers of Union Council minutes will be aware, both the Union and the Committee appointed by Senate to consider student housing made recommendations urging the provision of more on-campus housing. However, the previous Senate notwithstanding its concern for student's housing problems, believed that there was a shortage of campus land.

But Site Planning Report No. 2 states, "It is feasible to consider more than doubling the existing (*academic) accommodation within the academic centre." (*editorial addition)

Since it has now been clearly demonstrated that no shortage of space is likely to occur the Union is hopeful that Senate will approve the project.

HISTORICAL SUMMARY

In April last year, the Senate appointed a Committee to consider student housing, and the Union commissioned a feasibility study.

In response to the situation as described by the University's accommodation officer in May 1970.

"The increasing student population, added to an already inadequate supply of accommodation, causes very serious problems"

This situation was emphasised quantitatively later in the report

Total no. of student requests for houses and flats = 489

Total no. of houses and flats listed at the Accommodation office and Estate Agents (allowing for duplication) = 151

From this it can be presumed that at least 338 requests were unsatisfied. It should also be noted that some students rent accommodation in areas remote from the University, which are not covered by this listing; also that requests are often made on behalf of several other people.

This trend can be expected to accelerate in future years since:

- (a) Despite efforts to limit the University's enrolment the full-time student population in the next two years (prior to the opening of Griffith University) can be expected to increase significantly. (Only 55% approx. will be living at home).
- (b) Student income, as with other low-income groups, is unlikely to maintain parity with inflationary trends.
- (c) The demolition of old houses and their replacement with flats aimed at the middle-income demand, is rapidly increasing. (The Accommodation Officer's report states that 151 houses/flats were listed from

December 1969 to May 1971, a decline of 100% approx. from previous years. (Newly built 2 bedroom flats rent for up to \$35.00))

Obviously all students find accommodation of some sort, but poor conditions often necessitate change of address. Both the Accommodation Officer and the Senate's 1965 survey claim this occurs to a significant extent. The undesirability of a shift (which may occur several times) was expressed by the 1965 Senate Committee.

"— changing one's place of abode during the academic year can involve great disruption to one's studies. Frequently, the student tolerates poor conditions for some time before shifting, with consequent reductions to his efficiency. Finding suitable alternative accommodation may be time consuming and so too, the procedure of packing, shifting, and unpacking."

The 1965 survey also showed the extent to which various characteristics were regarded as desirable. (Section 4.) The most relevant are listed below:

The almost unanimous demand for privacy, bookshelves, an individual study table and power point shows the necessity of providing individual study-bedrooms specially designed for student use. This argument is further supported by the desire of 91% of respondents to live near other students and of 94% to obtain occasional study assistance from a tutor or another student.

The most significant statistics show that whereas 99% of respondents regard proximity to the university as essential only 56% approx. of the non-collegiate students actually lived close to the university. (Current assessments indicate that this proportion has not increased significantly.)

In addition the Accommodation Officer reported that of approx. 2,000 interviews in 1969 the most common problems encountered were:

- limited financial resources of most students;
- high cost of accommodation in vicinity of university;
- lack of a separate study-bedrooms complete with desk and adequate lighting.
- time involved travelling to and from university;
- cost of public transport (when available) can be as high as three to four dollars per week;
- Discrimination — in general the public are not convinced of the desirability of having students as tenants;
- students' academic performance affected by inadequate accommodation — the necessity for frequent changes and adaptation to a new environment.

Lack of Diversity of Accommodation on Campus, — only College accommodation is provided on the campus.

At its meeting in July 1971 the Senate "student housing" Committee resolved:

"that this Committee believes its preliminary investigation indicated that student accommodation is necessary for 400 students."

In addition to personal observations concerning students' needs, the primary factor in formulating the resolution was the following report:

"The University Statistics for 1970 show that during that year approximately 1600 full-time day students had to find their own accommodation. — 970 students sought assistance from the Accommodation Officer in finding suitable accommodation in 1970. Of these 970 students, 720 sought accommodation of the type classified as House, Flat or Room Only. —

The number of students seeking Houses, Flats or Room Only is even greater than it would appear since of the 720 students interviewed by the Accommodation Officer many were acting on behalf of a small group of friends. It is notable that there was an increase of 190 requests here over the 1969 total of 530. Again, 105 married couples asked for Flats or houses in 1969 whereas the 1970 total was 135, an increase of 30 married couples.

Another interesting comparison is — in 1969, 527 students (i.e. 66%) notified their acceptance of accommodation; in 1970 only 392 students (i.e. 37%) notified their acceptance of accommodation. — This would still leave perhaps 53% who abandoned their search and remained in unsuitable accommodation for 1970 because they had no alternative."

(Note: This indicates that a minimum of 380 students could not find satisfactory accommodation.)

In mid-1971 the Union conducted its referendum on student housing; the purpose being to test its hypothesis concerning the need for an on-campus alternative to the "college system". It was generally believed that an on-campus site was necessary, not only to satisfy student demands, but also because of the high cost of, and restrictive regulations controlling sites in adjacent suburbs.

The alternative dwelling type chosen was flats having from one to four occupants.

There have been several non-collegiate housing projects in Australia, particularly at La Trobe, A.N.U., the University of Adelaide and several C.A.E.'s. From its 5th Report it is also apparent that the A.U.C. has altered its attitude to non-collegiate accommodation and is now STRONGLY IN FAVOUR of alternative on-campus accommodation types.

La Trobe is the first campus so far to initiate such a concept. In its first 2 stages it is providing accommodation for approx. 130 occupants.

- (i) The actual building consists of 4 different flat types.
- (ii) The rental of these flats is \$26 per week inclusive of heating and hot water.
- (iii) By using a system of moveable walls, each flat consists of one, two or three bedrooms as requested by the group of students or married couple renting it.
- (iv) The project, aimed at presenting a balanced community, allocated flats for both student and staff occupancy. There is no supervision.
- (v) The flats themselves are operated by a company. Maintenance of public areas and gardens is attended to by the Staff and Student Housing Office. Rent collection is

Continued overleaf

handled by the University Accounts Section. The figures quoted in the initial statement of the Finance Committee show that the project will be economically viable with an expected 85% rate of occupancy.

La Trobe University offers three kinds of accommodation and thus has met the challenge of the changing needs of students. It has also commenced a new scheme for the Colleges. The average cost of College accommodation in Melbourne is \$23 per week. Menzies College now ask a weekly rental of \$10.40. The students then pay for whatever meals they take in the College dining room. Three meals per day would cost between \$8 and \$10 weekly. Each floor has a kitchen with cooking facilities, so that the students can do their own cooking. Catering has not decreased noticeably and the students are much more satisfied with this arrangement. In fact the students say that meals now cost them less than \$8 to \$10 per week.

It must be emphasized that a hall of residence is not regarded as an adequate alternative to a college. Indeed, with the discrediting of the traditional hierarchical social structure, and the improving tutorial services provided within Academic Departments plus the increasing popularity of such things as electric frying pans; it could be said that some colleges are becoming more like halls of residence.

The hall of residence concept seems to exist as a hybrid of the "communal" college and the "independent" flat. One example, at the C.C.A.E., where twelve students share eating and toilet facilities could most aptly be described as an oversized flat. And, as shown in 1.11, the opposite extreme, where a communal kitchen and dining room is available by choice, requires only a change of policy by existing colleges.

Union Referendum Results (July 1971)

Only the most relevant results are presented. The total number of respondents was 3019.

Students were asked to state both their current term accommodation and their preference for term accommodation given their current financial circumstances.

	Current Accommodation	Preferred Accommodation
Parents'/Guardian's Home (P/G H)	1633 55% approx	1134
Rented House/Flat (R H/F)	485 16% approx	479
Own House	255	325
College/Hostel (C/H)	438 14% approx	291
Private Board (P.B.)	146	64
Other	35	42
On-Campus Flat (O-C F)		556 (19.5% approx)

This quite conclusively shows, that if students' right to a choice of accommodation is accepted by the Senate then on-campus flats will prove very popular.

A further breakdown of preferences is shown.

Current Accommodation	Preferred Accommodation
P/G H	R H/F O-C F C/H P.B.
P/G H 1097	138 224 72 11
R H/F 9	261 138 7 1
C/H 12	49 144 205 6
P.B. 12	29 39 6 46

These statistics show quite conclusively that if students in each type of current accommodation wish a change, then they overwhelmingly prefer on-campus flats.

Of those students who indicated a preference for an on-campus flat, the demand for each type is approximately as follows:

Single person flatette	148	30%
Two person flat	174	35%
Three person flat	99	20%
Four person flat	78	15%

In late 1971 the union prepared a proposal for 3 storey walk-up type housing. It had been calculated that students expected to pay up to a maximum of \$10.00 per person per week (plus an allocation of \$8.00 per week for food).

Concerning the Union's 1971 report, take particular notice of the following section—

"The Site — Off Campus"

It is not considered feasible to build off-campus for the following reasons.

(a) Avoidance of the high capital cost involved in the acquisition of Residential "B" sites in adjacent suburbs. (e.g. 78 pers. of land in Macquarie Street, St. Lucia, is currently worth \$80,000. Since it has a permit for 32 two-bedroom units, at that rate approx. 3½ acres of land costing a minimum of \$550,000 approx. would be necessary for 400 students.)

(b) Avoidance of crowded living conditions. Since land would be so expensive it would need to be occupied to the maximum allowable limit. As one car per unit is required to be parked on the site, a socially undesirable situation would be created.

(c) Avoidance of B.C.C. statutory limitations (e.g. planning permission, site restrictions, etc.)

(d) Since any land involved will be purchased and not acquired by deed to gift it may not gain exemption from any or all of the B.C.C. rates.

(e) It is unlikely that enough land would be available within reasonable walking distance; this is important since transport costs and inconvenience are avoided by an on-campus site. Also, an on-campus site fosters a more intense involvement in University life.

There have been suggestions that sites across the river site are relatively cheaper and within reasonable distance of the University. However, Union officials were of the opinion that 400 students would not generate enough demand to keep the ferry operating late at night, on weekends and during holidays. Without access to library, recreational and sporting facilities on these occasions and for other psychological reasons a cross-river site is unlikely to be satisfactory.

The above statement is substantiated by the repeated failure of private developers to provide cheap accommodation specifically suited to student needs. Over the years the Accommodation Officer has co-operated in many such attempts, the most recent being earlier this year. Civil and Civic did a study of a large site in Swann Road, Taringa dn came to the conclusion that even a cost of approximately \$15.00 per week (with six students sharing a kitchen) would not be feasible. (It should be noted that whereas 120 sq. ft. per study-bedroom is desirable, developers can build a 130 sq. ft. bedroom for 2 occupants and charge accordingly).

PROPOSED PROJECT ORGANIZATION

There are two alternative means of ownership of this project.

In line with recent AUC statements concerning the desirability of University ownership of proposed housing projects, the University could form a housing company within its existing structure.

However the Senate may prefer, and win AUC support for the alternative hypothesised by the Union; i.e. the formation of a Board of Directors of a Company limited by guarantee (members being nominated by the Senate and the Union). This Company could be granted a leasehold of part of the University site, but would remain subject to the University statutes.

Information had been obtained on a corporate body formed by La Trobe University.

La Trobe University Housing Ltd. is a company limited by guarantee and not having a share capital and its constitution is framed under the requirements of the Victorian Companies Act 1961.

This body is responsible to the University but had autonomy in administration, subject to the University Statutes. There was a similarity to Union College which had originated as a project of the University of Queensland Union with an advisory council but has since become autonomous. On the basis of what has been achieved at La Trobe University it is hoped that the financing of a similar project at this University will be possible.

It is also proposed that a Board of Management be formed to handle the day to day running of the development. Its members would include the Board of Directors, the Warden, Union officials and employees and representatives of the "tenants association".

It is proposed that rent collection, maintenance and clerical services be provided by the Union and that letting be carried out by the University accommodation office in consultation with the warden.

The "tenants association" is envisaged as the vehicle whereby social, cultural and other co-operative action can be fostered. It is anticipated that (as at Union College) this association would be capable of maintaining self-discipline and order.

PROJECT DESCRIPTION

As shown on plans in the Executive Secretary's office the flats are proposed as 3 storey walkups of load bearing masonry construction, having one stairwell per 6 units.

Schedule of Accommodation	occupants
3 TYPE B 4 student bedsitters sharing shower, toilet and hand basin	12 @ \$4075
6 TYPE BT 2 student bedsitters and 1 tutors bedsitter	18 @ \$5300 (for tutor)
17 TYPE C 2 bedroom flats	34 @ \$4450
6 TYPE D 3 bedroom flats	18 @ \$3950
6 TYPE E 4 Bedroom flats	24 @ \$3575

TOTAL OCCUPANCY — 100 STUDENTS

AND 6 TUTORS

Common/Tutorial Room, Phone/Reception Room and Storeroom (TYPE C.R.T. on drawing) being a converted TYPE C flat.

Common/Tutorial Room (TYPE C.T.) 400 sq. ft. with toilet and hand basin.

Laundry and Store (TYPE L) 400 sq. ft. incorporating garbage collection point, 3 washing machines, 6 tubs, 3 ironing boards, 2 drying cabinets, 3 clothes hoists and a drip-dry area.

Warden's Residence (TYPE W) 120 sq. ft.

Parking for 31 cars.

(The above costings include a cost of \$950 per occupant for communal facilities and ground works)



COSTING AND TIMING

Depending on the interest rate charged for any loan it is expected that rents will be no greater than \$10.00 per week.

It is anticipated that a design and construction period of 10 months will be necessary.

While it seems highly likely that the AUC will favourably consider a subsidy for any proposal in the 1976-78 triennium, it should be realised that at the current inflationary rate of 10% p.a., a 50% subsidy will be diminished to 20% if the project is delayed for four years.

Also, since an urgent demand already exists, a delay until 1977 will be of no value in ameliorating the problem.

THE SITE

The site originally envisaged was the knoll to the north of Sir Fred Schonell Drive. Considering Buildings and Grounds Committee's decision to maintain a building-free, vista from the tower through to the river this is no longer possible.

In 1971 the University Architect presented an analysis of the potential for student housing of several on-campus sites. Of these, he found that the hockey field near the Dutton Park ferry was extremely suitable.

Based on his recommendation, but unwilling to disrupt an existing recreational use, the Union DECIDED TO LOCATE THE PROJECT ON THE ROADWAY OF CARMODY CREEK ROAD. The removal of this roadway has been proposed in the Master Plan, and as the site plan shows it is possible to avoid destruction of any existing trees.

By the imposition of a covenant, with severe penalties, during the building period significant damage to the root structure and branches of the jacaranda avenue will be avoided.

As has been shown at Union College it is feasible to design a building complex IN HARMONY WITH THE EXISTING VEGETATION.

Owing to the limitations of the site, no further extensions will be possible.

As part of the project it is intended to finance part of the pathway to the ferry and remove a further 160 ft. of the roadway, plus \$6,000 worth of landscaping.

TERTIARY EDUCATION THE GREAT LEVELLER

Among the many other inconsistencies of the report, it refers to the central precinct landscaping. "the landscaping proposal... recognizes the lack of topsoil (15 feet of ground was removed for the construction of the Forgan-Smith building), and proposes that extensive topsoils be imported and moulded to heights from 6 to 10 feet."

And yet in the proposal for an axially symmetrical approach road in the North Precinct, the University Architect neglects to mention that the knoll near the boatshed will be bulldozed flat to provide a "vista" through to the river.

The contradiction with the sentiments expressed in 3.02.04 of Site Planning Report No. 1 are amazing.

Referring to the alteration if the various land forms on campus, it reads

"The knoll has been lowered and buried under a massive building complex, the northern lagoon, most of Carmody Creek, and every gully has been extensively filled... It appears that over the years a concerted effort has been made to smooth out the site in an attempt to make it all level."

Surely, in the future design of this campus we should be able to avoid repeating the misjudgements of the past.

Why can't the Western Arts building be planted with ivy (in the Oxbridge tradition) saving \$600,000 (plus inflation) for a non-functional sandstone facing.

LANDSCAPING

It is surely obvious that vegetation is the principal element in the creation of an attractive urban environment.

In an age where man's destruction of the natural environment is rapidly becoming a matter of intense public concern, the University's future landscaping should be based on reintroduction of various native ecosystems.

Dr. H. T. Clifford, Dept. of Botany in his appendix to Site Planning Report No. 1 states that "most of the original vegetation has been grossly disturbed" and that the "use of the site as a source of teaching material" has been greatly reduced by "the recent expansion of buildings, car parks and roads".

Owing to the many conflicting architectural styles found on campus, we should do as the University Architect suggests in 8.04.02 and hide buildings behind "generous planting of substantial trees".

Extensive plantings of belts of natural vegetation replacing lawns would also be of value in reducing landscaping costs, and satisfy Dr. Clifford's recommendation "that future planning consider carefully the role of the grounds in Biological Teaching".

Accordingly the Union recommends to the Senate that future landscaping be based on reintroduction of various natural ecosystems.

An unprecedented proposal in the planning committee Mr. Chairman: after hearing all these exciting new plans that over the next x years will develop us and make room for several exciting new departments which will make room for many exciting new customers and their cars and the cars of the V.I.P.s who will come to address the new customers and the cars of the exciting car-park attendants who will come to look after the cars of the exciting V.I.P.s who will come to address the exciting new customers,

may I propose an even more exciting indeed, revolutionary plan? namely, that for the next x years (and let x equal infinity, eternity) we erect absolutely nothing but our own natural non-permanent bio-degradable erections—otherwise, nothing at all no car park neither for V.I.P.s nor exciting new customers nor their attendants no new departments no flagstaffs plazas agoras overhead tunnels underground soup-kitchens or devastated landscaped areas—nothing: let every flame-tree stand, every sun-burst of wattle, and every field of grass to the glory of God remain not a concrete parade-ground for processing V.I.P.s but as it is now and ever may be for swallows and lovers and willy-wagtails a field of grass. I cannot imagine any development more exciting, Mr. Chairman, than that.

Horne Edgate

TRAVEL 1

WAR IS a dirty word — particularly within Israel's tourist industry.

Normally a discussion on politics with the context of travel and tourism is as ill-mannered as drinking soup from a saucer. But in Israel's case, politics play a predominant role influencing the public's decision to travel.

As such, the subject has a direct bearing on the saleability of Israel as a tourist destination, by creating in the potential traveller's mind questions which must be answered.

The onus for answering these questions adequately rests firmly with the travel agent, tour operator, carrier, and government tourist office.

Grave obstacles

Israel's Minister for Tourism, Moshe Kol, pinpointed the influence of Middle East politics on the travelling public as the major stumbling block to the rapid growth of tourism to his country.

To quote his recent statement to the Knesset, "the attainment of the record tourist influx this year was beset by the gravest of objective obstacles.

"Throughout the world, the mass communications media have mirrored the political and military situation in the Middle East, and especially the Soviet involvement.

"These media, which exert a decisive sway over millions of people, have been competing with each other for sensations, and have been predicting imminent catastrophes as well."

He went on to say the Ministry of Tourism's offices throughout the world were devoting their efforts to depicting Israel as a developing, peace-loving country; a tourist land where life was proceeding as usual, and a place where any tourist could spend a holiday without becoming involved in hostilities. I have stood on a shrapnel-riddled lido on the shores of the Dead Sea — where 12 months before an American woman tourist was killed in a raid — and wondered.

Before I go on, I would like to make it absolutely clear that I consider myself a rank amateur where politics are concerned. As a travel industry writer whose function it is to encourage the promotion of tourism, and to inform the retail travel industry of facts, not opinions, I intend to stay that way.

Fact one: The Middle East situation is a matter of public interest, and public record. Whatever Moshe Kol, or anyone else involved in travel may feel, the Middle East is news, and will continue to be news until the current situation is resolved.

Fact two: The tourist, unless he or she travels with eyes firmly shut, will come into frequent contact with uniformed military and para-military personnel, sometimes armed. Check points have been established on all major roads, and all forms of vehicular transport, and their occupants, are screened. But tourist vehicles are clearly marked, and the Military Police manning the checkpoints often give their passengers little more than a cursory glance. Inter-city cheruts — communal taxis which provide excellent service at very reasonable cost — may be stopped, but no one is required to leave the car and the delay is usually a matter of seconds.

Out of bounds

Fact three: The Israeli civil and military authorities take the utmost care to keep tourists away from military areas. The areas bordering Lebanon, the Golan Heights, a comfortably wide strip west of the

TRAVEL

Tourism is alive and well, and living in ISRAEL

Jordan River, and the Suez Canal region, are definitely out of bounds for the visitor. Special permission may be obtained for certain travellers to enter these areas, providing they have a sound reason for doing so, but this will not be granted, and should not be sought, for those people that are little more than curious. Agents who receive genuine inquiries from clients regarding special permits would be well advised to refer them to local Israeli consular authorities.

Fact four: Incidents which have resulted in injuries to tourists over the past three years can, to the best of my knowledge, be counted on one hand. Israeli authorities are very frank in discussing these incidents, and only one has been reported in the past 12

months. Statistically, travel within Israel is safer, far safer, than going for a weekend drive on Australia's roads.

Fact five: Tourist figures for the first six months of this year showed an increase of 11 per cent on the same period in 1969. The 238,300 tourists who entered the country in that time represented an all-time record, surpassing the previous best achieved in 1968 by 4.5 per cent. Average length of stay in 1969 was 15 days, and there is no indication in Mr. Kol's statement that this has diminished.

I believe the facts speak for themselves. Today's potential traveller is a reasonably sophisticated individual who tends to demand to know the facts, and is entitled to be told. At the risk of being presumptuous, I feel a travel consultant who adopts a "hear nothing, see nothing" attitude about Israel, is running a serious risk of creating an unhappy client.

There is much to enjoy in the Holy Land, and the well-informed traveller is the one that will enjoy Israel most.

Kibbutzim, kibbutzniks

THE KIBBUTZ is probably the best-known aspect of life in Israel. It is one of several forms of co-operative settlement found in Israel. The other most important type is the moshav.

Latest figures put the number of kibbutzim in the country at about 250, varying in size from 90 to 2000 people.

Kibbutz members are engaged mainly in agricultural work, or light industry, or a mixture of both. The principle on which they work is communism with a small "c". No member of the kibbutz draws wages, but housing, food, clothes, and everything else is provided from communal funds.

Newcomers screened

Kibbutzim are limited, mainly by the amount of land available to them. Newcomers are carefully screened to

ensure that they will fit in with existing members. Language, background, race, religion, are all taken into account. In fact, there is one kibbutz in the Galilee run by Australians and South Africans.

Kibbutzniks work for the community, and the community provides their needs. Older, well-established kibbutzim are very comfortably off.

Housing and amenities are provided in accordance with the financial standing of the community as a whole. A wealthy kibbutz can afford to provide radios for everyone, and, in time, television sets. New houses are provided on a seniority basis. The longer a member stays, the better off he'll be.

The only drawback is that no one can amass any personal wealth. If a kibbutznik leaves a community, he goes with the clothes on his back, a few essentials, and perhaps a little money to tide him over.

Many kibbutzim have outgrown themselves in that their members seek

outside work because the size of the land is limited, and all on-site jobs are filled. In cases such as this, the member brings his earnings back to the kibbutz.

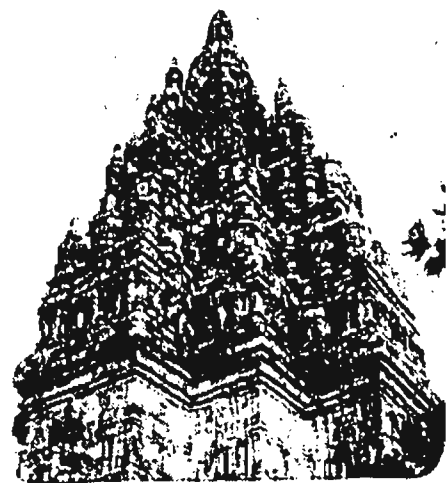
Some kibbutzniks gain very high positions in Israel. The country's Prime Minister, Golda Meir, is a kibbutznik.

The moshav is more of a co-operative production and marketing organisation than the "all for one, and one for all" kibbutz.

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TRAVEL 2

u.s.a.

The U.S.A. is a country we have bombarded at us almost continually. Television, radio and newspapers ceaselessly fling out praises or criticisms of the country — but how much of this is distorted in fact, what is the U.S.A. really like? If you're interested in spending a couple of months in the country and finding out for yourself, the A.U.S. scheme to the U.S.A. is for you.

Last year 137 students took the A.U.S. charter flight to San Francisco and spent their vacation trekking all over the U.S.A., Canada and Latin America. North America is generally considered to be a rather expensive place and this often deters people, however, hundreds of students over the last couple of years have proven that you can definitely see the country on a beer budget. There are many ways of travelling about, depending largely on your interests and the amount of money in your pocket. Hitch-hiking is one of the most popular ways of getting from A to B, not only because it is inexpensive, but also because it gives you the opportunity to experience the areas you're travelling through,

and meet a variety of the local people. For similar reasons, many students travel by Greyhound Bus, which is very economical if you buy an Unlimited Travel ticket that can be purchased before you leave Australia. Another cheap way to travel cross country is to drive. Auto Driveaway companies often need to have cars driven from coast to coast — they pay for the petrol and you do the driving, which is a really good deal, particularly if there are a few of you travelling together. Air travel in the U.S. is cheaper than in Australia, and there are a number of schemes which allow you to fly for prices well below the conventional air fare. If you're 21 or under you can travel Student Standby which automatically cuts off 1/3 of the fare. There are also two particularly good schemes for overseas visitors — the See America ticket gives you unlimited flying anywhere in the country (including Alaska) for 21 days and costs only US\$150. The Discount 50 ticket allows you to fly around the country for 45

CONTINUED P.9

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PAGE 7

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TRAVEL 3

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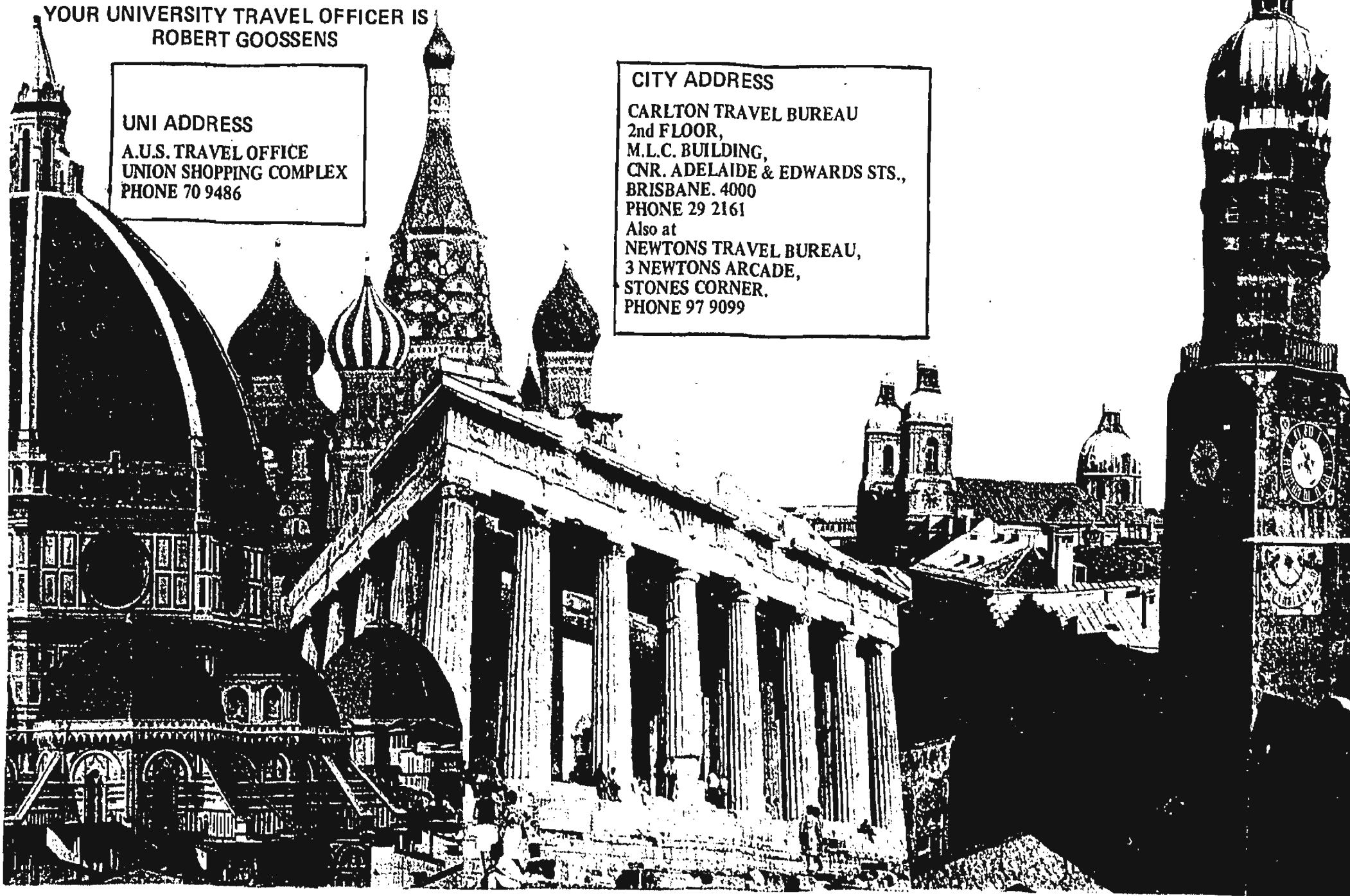
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TRAVEL 4

CRUISE IN THE BEAUTIFUL PACIFIC THIS CHRISTMAS

Christmas aboard ship is an experience which can never be forgotten. And this year P. & O. offers three opportunities to put that to the test with cruises aboard **ORIANA**, **ORONSAY** and **HIMALAYA**.

From sun-up on Christmas Eve, there's an air of more than the usual excitement about the ship.

The crew scuttle by with green trees — live (now, where do they find THEM mid-Pacific?). Giggling hostesses rush past with bundles of strange parcels, arms filled with an odd assortment of decorations.

The kiddies on board are impatient to get off to their own playroom, as soon as it opens after breakfast.

During the morning, Christmas carols and strange tapping noises come from the Nursery area—little ones practising for the concert, later in the afternoon—fixing up fancy dress for their very own "Ball" to come later in the day.

Parties everywhere

For the rest of us "children - at - heart" — it's just as exciting.

Christmas parties start early in the day. With all those people, wanting to have all those parties — and everyone double booked — it's wise to start early! I can even remember tearing off to a Champagne and Chicken breakfast at 8.30 in the morning.

Lunchtime arrives, and everyone breathes with relief at a moment of non-activity, before the afternoon fun gets under way.

More parties, more chats, as people crowd into the ship's shop, buying duty-free gifts for

new found friends — swapping Christmas cards, popping notes under cabin doors.

Christmas Eve night is a friendly affair — a relaxing dinner (if six course dinners ever can be relaxing), a Christmas Dance in the ballroom — then the Carol Singers arrive — Officers dressed up in true British tradition — long coats, scarves, carrying lanterns, and wandering throughout the ship, giving voice in all the bars, lounges and corridors.

Christmas Day

It's all so gentle, so utterly romantic, and as the lights dim, and the whole ship joins in "Away in a Manger," you can't help but dig in your pocket for the odd, crumpled tissue.

At midnight, ship's Officers and passengers assemble for an inter-denominational Church service.

Afterwards, a last drink, before a relatively early night, in preparation for the Big Day.

Christmas Day begins with another quick breakfast — more parties — everyone's awake and laughing.

In the morning — special Church services are held — the kiddies are in the playroom, getting ready for the Big Event. Their special Christmas Party (and the ship presents every child with a gift) — and the arrival of the man of the moment — Santa Claus.

How do they do it, no-

one knows — but he arrives on a sleigh pulled by Reindeers (a team of ship's Officers, no less, playing front and hind legs!).

When all the cakes and sweets, pies and goodies have been consumed —

away they go to play in the nursery, before they have their own Christmas dinner — giving parents plenty of time to make preparations for the long night ahead.

Everyone dresses — long evening gowns or short cocktail frocks. The ship's hairdressers have been flat out all day.

Pre-dinner parties are held all over the ship, the bars are overflowing with bon amie — not to mention people.

And, then, it's dinner-time.

All the tradition you can muster — Australian Christmas in true British style — held in mid-Pacific. What a feeling. What a sight!

Roast turkey with Cranberry sauce — the Champagne pops ricochet all over the restaurant.

Then, the climax of the evening — the arrival of the Christmas pudding.

What pomp and ceremony — what a romantic moment.

Boxing Day in a different way

The lights in the restaurants are dimmed — the stewards appear suddenly, each balancing a pudding on a platter — and each pudding covered with sparklers —

lighting the whole restaurant with magic. Then, the flames from the brandy add a warm and welcoming glow.

And that's not all — afterwards coffee and liqueurs in one of the many lounges (and this night everyone goes, because it is, after all, Christmas!) then on to the Ball!

The bands play all the old favourites, the new favourites — the disco opens up for all those rearing to go on, after the ball is over.

And next day, the excitement prevails.

If you are aboard **ORIANA** this year, for example, you will arrive in Auckland on Boxing Day. Maoris will dance a special welcome at the wharf. There's a whole day ahead of you, to meet the people, go for an island jaunt into a Maori village, time for a visit to Rotorua with its whirling, spouting geysers, bubbling, boiling mud and natural hot springs. All night to see the City, do a round of the restaurants and night clubs.

Three days later — Tonga, the Friendly Isles and Nukualofa, their Capital. Wonderful, welcoming people crowd the wharf to greet you, to take you into their homes — and their hearts.

Browse through the fascinating open market places, filled with intricate basketware, beautifully hand beaten and decorated Tapa cloths, go to see the Hamong's stoness, the late beloved Queen Salote's tomb, the palace of the King.

Then, it's New Year, right in the middle of the Pacific Ocean. Yet another special Gala Night,

with more parties, more people, band playing through the night — then the watching hour — and later more fun. What a way to bring in the New Year and farewell the old!

Beauty and shopping

All this, and more to come — Honolulu (Hawaii) with its big glamorous hotels, beach hide-a-ways, beautiful people. Waikiki Beach where you rub shoulders with the famous, millionaires mecca — a magical holiday resort — and you're a part of it.

Then, on to Pago Pago the most beautiful natural harbour in the world, Suva — the duty free shopping spot famous for its incredible bargains. You'll find it's all such good natured fun, beating down the prices with a canny shop-keeper, bargaining like mad for a camera you've had your eye on, a transistor or a stereo (you know you're going to win in the end!).

Don't miss a launch trip to a tiny island in Suva Harbour, and join in a native feast — roast pork island style, pineapple, bananas, sweeter than you've ever tasted.

On, between ports, you experience that marvellous shipboard life.

Every day, gently woken by a courteous steward, bringing your morning tea or coffee, a quick dip in the pool before breakfast — deck tennis or quoits all morning, sun baking on one of the wide open decks (or just sitting in your private, favourite spot, gazing out to sea with a good book from the well stocked ship's library for company).

Superliner **ORIANA** leaves Sydney December 23 for 22 days arriving back January 14. Prices: First Class from \$851; Tourist Class from \$543.

Popular One Class **HIMALAYA** leaves Sydney December 22 for 18 days to Suva, Nukualofa, Honolulu, Pago Pago and Noumea. One Class from \$364.

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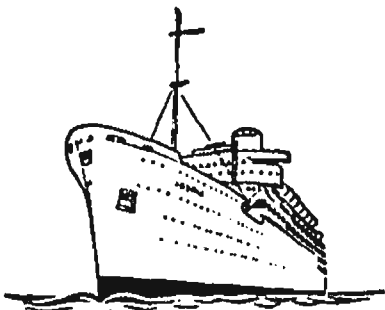


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GAY BUCCANEER CRUISE	10 DEC	12 DAYS
STH SEAS ISLES CRUISE	11 DEC	10 DAYS
XMAS & NEW YEAR CRUISE	22 DEC	11 DAYS
XMAS & NEW YEAR CRUISE	22 DEC	15 DAYS
ALOHA HAWAII CRUISE	23 DEC	22 DAYS
FRIENDLY ISLES CRUISE	7 JAN	11 DAYS
SEA REVEL CRUISE	15 JAN	13 DAYS
TREASURE HUNT CRUISE	19 JAN	11 DAYS
DOUBLE DATELINE CRUISE	1 FEB	12 DAYS
SUMMER TIME CRUISE	6 FEB	12 DAYS
TROPICANA CRUISE	14 FEB	13 DAYS
COCONUT GROVE CRUISE	19 FEB	11 DAYS
PACIFIC GADABOUT CRUISE	28 FEB	12 DAYS
PLEASURE SEAKERS CRUISE	3 MAR	11 DAYS
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SUN AHoy CRUISE	15 MAY	14 DAYS

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ASK FOR ROBERT GOOSSENS

TRAVEL 5

This year, in co-operation with Eric Butler Inc. and Harry M. Miller Prods., A.U.S. has guaranteed to ship 5000 students out of Australia. Queensland students, as part of the ever expanding A.U.S. machine, are liable to all the benefits involved. From as little as \$137, you can leave Australian shores and return when you wish. For the more fortunate, a mere \$1000 will give a 20 day all inclusive tour of Russia and an unlimited stop over in Europe (return when you wish).

We do humbly apologize for the time to finalise details. However, last year, Qantase lost \$30,000 by double booking planes and flying people to the wrong places. They decided to take more time this year.

As most schemes are not finalised till November 5, we hope these will be ample time for students to organise travel for the vacation. Loans are available, insurance and medical expenses can be fixed and deductions can be offered for being a leader on many of the schemes.

NZ

NZ is a most pleasant place to avoid Commonwealth Policemen. A mere \$137.70 guarantees you an open dated return fare to NZ. Fly over on any of the specified days and return when you wish within 6 months.

Last year over 2/3 of the students on A.U.S. schemes at UQU went to NZ. The beauty of the scheme is the open dated return and the suitability of climate. NZ shows all the scenery features of Europe without the expense or distance.

The place is a working man's paradise and prices are reasonably low. An adequate network of student hostels means accommodation at under \$1 a night.

Hitchhikers are an accepted way of life. Distances are reasonably short and it is easy to cover the country fairly easily.

The important thing is that a few weeks work can get you to NZ and once there, you live more cheaply than you do in Australia. It's Tasmania but better and cheaper than going to Perth.

Why wait, book now for NZ.

SE Asia

For a mere \$860, A.U.S. offers an all expenses included tour of 6 countries lasting just over 7 weeks. It is probably one of the best tours around. A student leader has charge of about 40 students who can see Asia in an unruffled yet comfortable way.

Last year, at no extra cost, Hong Kong supplied the sinking of the Queen Elizabeth. Not to be outdone, Manila burnt its airport down, thereby stranding 40 Australian tourists. However, all turned out well and the 40 became the first Australian students to take off from the Manila Golf Course.

The tour spends about 5 days in areas as far removed as Bandering & Djakarta (70 miles away). Ample time is available for

independent wanderings. If the tour leader is anything like the 6 foot, 16 stone Jewish boy who lives at St. Kilda and has trouble with the ladies who go knocking on the doors at night, it will be a trip to remember.

Maybe now you're wondering why A.U.S. always have their conferences in St. Kilda.

Singapore/
Hong Kong
Tokyo

If the ostreperous little man in the Immigration Dept. demands it, A.U.S. runs terminal flights to Hong Kong and Singapore. This is not to say that return flights are not available, but many students find this a quick, cheap way home. Both centres are renowned as bargain centres but after a week or two in either, most students find it time to move on.

As bases for further exploration though, both are ideal. The Singapore Govt. reserves the right to reject tourists and at the present moment long hair is sufficient grounds for refusal. A.U.S. insurance does not cover the loss of hair. While A.U.S. has protested, there seems little likelihood of change.

Japan can be reached from Hong Kong for an extra \$50 return with A.U.S. A student exchange programme enables most students to stay with Japanese families, thereby

gaining an insight to Japanese culture and life. The weather at this time of year is generally quite reasonable for sight seeing, providing you don't wander too far north of Tokyo.

NOUMEA
& FIJI

Noumea and Fiji, those two tropical paradises, are served by A.U.S. Noumea is \$135 return and Fiji \$190. Both have their drawbacks: Fiji is liable to have cyclones with 100 ins. or so of rain during Dec-Jan. and Noumea is in many ways a big rambling mining town.

However, away from the centres of tourism (which in Fiji - astronomical prices), both islands have a real charm and a unique quality. Noumea still has many of the old French buildings left but superimposed has been the exigencies of a twenty nickel mine and all the pollution thus caused. It is refreshing, though, to escape the humdrum of life in Australia and \$135 for a change in customs, culture and people is money well spent. Possibly, Australians won't be terribly popular because of the boycott on goods.

Fiji is good if you can convince people you're not an American tourist. A.U.S. is organising some tours across the island with Fijian students as leaders. At the present moment, the operators are skinning all and sundry and unless a

scheme like this succeeds, the prices to get around will be exorbitant. The Fijian chain of islands numbers over 100 so it is quite likely there are still a few untarnished examples left.

There are far more trips offered by A.U.S. Come and see Bob Goessens in Travel Week in the A.U.S. Travel Office. Find out about the Pacific Cruises, the trips to Indonesia, China and Singapore. After all, it's cheaper doing nothing in Indonesia than it is in Australia. Think about it, talk about it - it's not as dear as you think.

See the world for less - travel A.U.S.

USA

On no other A.U.S. scheme are more headaches encountered than on the USA scheme. How 5% of all participants disappear and are never heard of again is a mystery. Rumour has it some of the people found in a remote valley in the Appalachians murmured something about N.U.A.U.S.

Nevertheless, USA is a great place to visit except for the people, riots and the countryside. In the same continent, there are 2 countries, Canada and Mexico, which most people have never heard of. They offer primitive, unspoilt beauty on one hand and on the other, the superimposed cultures of France and Spain.

The USA is an excellent place for doctors to do their residency and the jobs are good enough for some to stay permanently. Anyhow, that's the reason A.U.S. gives for the disappearances.

For \$180, you can fly the Atlantic and come back again. The USA offers exciting possibilities as, when you have done the USA, Europe is waiting for only a little extra. To the south, one can encounter the Europe culture superposed on the Latin. It is worth warning that much of South America is unsuitable for individual travel and anyone contemplating the idea should be prepared to travel in groups.

ISRAEL

Getting A.U.S. to Israel is probably the best basis for seeing Europe in the vacation. To begin with, while most of Europe is freezing, Israel is still reasonably warm and you don't freeze to death immediately. Besides which, you're in the belly of Europe or Asia and from there it is easy to work your way through Europe. \$15 gets you to Athens by boat (as second class deck cargo), and from there, it's up to your own whims and fancies.

There's always living on a kibbutz for a week or two or archaeological digs for 2 weeks. Provided you tell the people about their wonderful country, the people treat you really well. And, for \$550 return; with two possible dates of

return, Israel is the place to commence your tour of Europe.

INDIA

Because of a minor war last year, the A.U.S. scheme to India did not operate. Some people on the scheme did have a few days in India but when Qantase realised Calcutta wasn't Singapore, it rectified the mistake.

India is merely an alternative starting off point for a trip in Asia. It offers cheap accommodation and meals, with exotic diseases at no extra cost. If one is willing to try, a trek north to Nepal and Afganistan is fascinating for the remaining month of your life. There are always hordes of students using India on the route to Europe so one isn't likely to get lonely. There are always a few people around!

The UK

A.U.S. offers flights to the UK for \$620 return. This is the rock bottom all air fare by Qantas and is guaranteed not to strand you in Singapore.

The UK is the logical starting off point for Europe. Travel within the UK is reasonably cheap

and most people seem to possess some relative, remote or not, who they can always latch onto in times of trouble. Because student travel is accepted in the UK and Europe, students can live fairly cheaply and schemes like "unlimited rail travel for 3 months" can be purchased. These schemes enable students to travel widely at a cheap rate.

In Europe, International Student Identity Card is widely accepted and its appearance will, obtain discounts in practically every available field.

Tours can be booked for Communist bloc countries from outside and it is often easier to travel through these countries on these schemes. Prices are reasonable e.g. all inclusive tour to Prague, Budapest and Warsaw for 12 days for \$85.

For the more adventurous, there is the \$190 fare from Perth to London. This involves a 6 day boat trip from Perth to Singapore in a 10 bed dormitory-cabin and a charter flight from Singapore to London. If you're able to get to Perth cheaply, it's the cheapest and one of the best ways to Europe.

FROM PAGE 6

days at 50% of the normal air fare - this means that you can fly from coast to coast and back again, with stopovers in cities of your choice for as little as US\$200.

Accommodation in the U.S. also need not be expensive. Students generally stay in Youth Hostels, cheap hotels, or simply head for the local university campus where they invariably find a spot to sleep. Many students also find that it's best to travel by night - then they simply sleep on the bus and avoid all accommodation costs.

If you're on a ticket budget you may be interested in booking into the Exchange Visitor Program which is run by the Council for International Educational Exchange in conjunction with A.U.S. Students selected for this scheme are provided with working visas which really helps to ease the financial burden. Students last year worked at a large variety of jobs - medical students worked in hospitals, some ski enthusiasts became waiters or housemaids at ski resorts such as Aspen and still other students simply picked up odd jobs when they needed the money. Applications for this scheme close on October 1st.

Once you're in the U.S.A., Canada and Mexico are readily accessible and many students take the opportunity to see some of these countries also. Mexico is particularly popular because it is a distinct contrast to the U.S., and has many archeological and anthropological sites of interest. It is also possible to see and do a lot in Mexico, with little strain on your pocket - this can be particularly handy towards the end of your stay when financial resources are usually fairly depleted.

If you're interested in seeing North America, you'll be interested in the A.U.S. scheme to the U.S.A. Head up to your local A.U.S. travel office and make some enquiries - see America for yourself!

Suzanne Down
USA Leader 1971/72

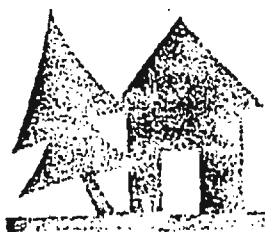
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Pollution 1

World Pollution Worsens

SEMPER REVIEW

There are reasons to believe that current human activities are leading this planet to an ecological disaster. The aim of this paper is, firstly, to look at some of these activities, and to consider the economic and social goals which ensure their continuance, and, secondly, to outline one of the detailed solutions proposed recently.

In 1970, a group of about 50 scientists held a meeting at MIT under the title of "Study of Critical Environmental Problems" (SCEP). To describe the processes contributing to environmental disturbance, they used the term "ecological demand", being the product of population growing exponentially at 5.6% per annum, or, in other words, it is doubling every 13.5 years.

Population.

The present world population is 3.6 billion. The average growth rate is 1.9% per annum, which gives a doubling time of about 35 years. While efforts are being made throughout the world to decrease this growth rate, it is clear that the world population will go on increasing for some considerable time.

In the under-developed countries, where 2/3 of the people of the world live, 40-45% of the population is under 15 years of age. The Population Council has calculated that if replacement rate (the 2 child family) is achieved throughout the world by 2000 A.D., then, because of the age structure in the UDC's, the world population will continue to grow for nearly another century, stabilizing at a level of about 8.2 billion, or 2.25 times the present figure.

The increased population will increase ecological demand, but its contribution may be relatively small. It will, however, directly affect food supply.

Food Supply.

There are reasons to believe that the world food supply is adequate to feed the present population - the fact that 1 - 2 billion people may be underfed is considered to be a matter of distribution. Given that the population will double somewhere between 35 and 100 years, can we hope that food production will keep pace with this increase?

Agricultural production can be increased by increasing either the area under cultivation or the yield per acre. F.A.O. believes that virtually all of the good land in the world is now in use, and predicts that all of the marginal land will be in use by 1985. There is little reason to believe that this marginal land will significantly increase food production. F.A.O. concentrates its efforts on improving yields, either by improved technology such as increased use of fertilizers and insecticides, or by the introduction of new varieties, which also require increased application of fertilizers (in some cases up to 27 times as much as normal varieties).

There is no doubt that these methods have increased yields, but there are also reasons to believe that intensive, monocultural agriculture is itself an ecological hazard, causing soil deterioration and subsequent erosion, and pollution due to run-off of fertilizers and pesticides. There is a possibility that the long-term ecological consequences of extending and intensifying this type of agriculture will be more serious than the immediate consequences of failing to increase food production.

Other sources of food, e.g. from the sea or from novel methods, seem to hold little promise of a significant increase in food production in the near future.

There seems to be virtually no hope of avoiding famines and associated disease epidemics in many parts of the world in the next 10-20 years. This is one aspect of the environmental crisis.

Fuel and Mineral Resources.

Another aspect of the crisis is the depletion of fuel and mineral resources.

Industrial growth has caused the demand for these resources to grow exponentially. A group of scientists at the Massachusetts Institute of Technology have computed the practical lifetimes of a number of resources, based on exponentially growing demand. A number of minerals, lead, mercury, tin and possible aluminium will run out by the end of the century if current growth continues. Probably most serious is the finding that petroleum will be exhausted in about 20 years. Even with linearly growing demand it would only last about 30 years. Coal will last longer, but only about 110 years, if exponential growth continues.

It will therefore be necessary to find alternative sources of energy in the relatively near future. The obvious alternative is nuclear power, but reserves of uranium may be depleted within 20 years. This time may be extended by breeder reactors. These use excess neutrons from uranium fission to produce other fissionable atoms, thereby producing more fuel than they consume. The successful development of breeder reactors is not assured, but if it is achieved it could solve the energy problem for 1,000 years or so. In this time it may be possible to develop thermonuclear sources of energy.

Assuming that breeder reactors can be successfully developed in time, we will still have other technological problems associated with the depletion of fossil fuels, as there will have to be a conversion to systems based on electrical energy, this being the only form of energy supplied by alternative sources.

If the predictions of petroleum supply are correct, then we have something less than 20 years to convert most of our transport systems to an alternative source of energy. The most likely

solution, at least for air and sea transport is the fuel cell, burning hydrogen and oxygen which are in turn produced from the electrolysis of water using energy supplied by nuclear power plants.

Assuming that the technology were available to make the conversion to fuel cell power, the costs of so doing may be enormous, thereby imposing heavy restrictions on international transport. This would in turn aggravate the problems associated with the depletion of fuel and mineral resources as well as with food supply.

Another contributor to ecological demand is pollution.

I have already referred to the fact that food production can only be raised by increased use of nitrogenous fertilizers and pesticides. These increases can be large. In Britain from 1945 to 1970, agricultural production increased 35% while the consumption of nitrogenous fertilizer increased by 800%. The experience in U.S.A. has been similar.

The use of inorganic fertilizers can cause the deterioration of soil structure, leading to drainage problems, which in turn requires increased use of fertilizers with increased run-off, and with the additional overall result of increased soil erosion.

We do not know what will be the long-term effects on aquatic life and soil fertility. It has been claimed that the increased use of inorganic fertilizers and pesticides may be responsible for the fact that agricultural production in the United Kingdom is levelling off and in some cases beginning to decline.

PESTICIDES

DDT is still the most commonly used pesticide. Its effect on bird reproduction and its accumulation in animal tissues, including those of

man, are now commonly known. It is also known that some fish are particularly sensitive to DDT, and that both zooplankton and phytoplankton are affected by low concentrations.

Levels around 10 parts per billion reduce photosynthesis in some phytoplankton. While these levels are not reached in the open sea, they are exceeded in locally contaminated areas. We also have to consider the ability of organisms to concentrate DDT in their tissues to levels well above those of their environment.

We know that birds which feed at the top of wholly oceanic food chains show high concentrations of DDT in their tissues. This may indicate that plankton is now significantly contaminated and not only in areas near sites of DDT effluent.

S.C.E.P. estimated that about 25% of DDT produced to date is now in the oceans and only 0.1% is accumulated in marine ecosystems. Therefore, even if we stop using DDT immediately, we may be faced with serious problems in the future from what we have already used.

Interference with plankton growth will not only breakdown the food chains which support fish and marine bird life, but will also reduce photosynthesis taking place within the oceans. The latter is considered to account for about 50% of global carbon dioxide fixation.

Apart from the environmental hazards involved in the use of DDT, it has also failed as an insecticide in many cases. This is partly due to developed resistance, and partly to effects on other species which were, in the natural system, predators of the pest species.

DDT is being phased out in developed countries, but there is every indication that its use will increase in under-developed countries, because of its low cost.

Its effects on marine ecosystems could be added to by other chemicals that we are dumping in the sea - fertilizers, herbicides, mercury, etc. There is also the frightening possibility that these compounds could interfere with the activities of soil micro-organisms which are the foundations of the whole eco-sphere.

It is a distinct possibility that by continuing present practices we could bring all life on this planet grinding to a halt.

MERCURY

We currently pour approx. 12 million metric tons into the environment each year - about 4 times the amount that nature puts into the sea. Concentrations up to 1 p.p.m. have been found in fish in various parts of the world. Blood levels in humans of 1.4 p.p.m. are fatal, while chromosome damage is reported at 0.2 p.p.m.

We also know that mercury salts can be converted by micro-organisms in the environment into more toxic and more readily assimilated alkyl mercurials.

AIR POLLUTION

Air pollution has been given considerable publicity. Major air pollutants include oxides of Sulphur and Nitrogen, ozone hydrocarbons, carbon monoxide, Lead and asbestos. Oxides of sulphur and of nitrogen, and ozone cause damage to the cilia of the bronchial tract and increase susceptibility to disease. These compounds have been linked with increasing deaths in urban areas from bronchitis, asthma, and emphysema.

Hydrocarbons, especially benzpyrene which occurs in significant concentrations in polluted air, have been associated with lung cancer.

It has also been established that

photochemical reactions occur among various pollutants in the atmosphere. Sulphur dioxide can be converted to highly corrosive sulphuric acid. Interactions between oxygen and oxides of nitrogen, catalysed by hydrocarbons, produce ozone. Nitrogen oxides and hydrocarbons occur in emissions from automobiles which are in fact responsible for about 60% of air pollution in cities.

In U.S.A., efforts have been made to control emissions of carbon monoxide and hydrocarbons, but, according to the Nader report on air pollution, these have largely failed.

While we have evidence on the effects of some pollutants such as sulphur dioxide, we have virtually no knowledge of the effects of long-term exposure to low levels of pollution.

This is produced from vehicle brake and clutch linings and from building materials. Several surveys of random autopsies in U.S. city hospitals showed "asbestos bodies" in up to 50% of cases. These are believed to lead in some circumstances to lung cancer and mesothelioma, another form of cancer.

An asbestos worker has about 7 times the normal risk of contracting lung cancer. A heavy smoker has approximately 10 times this risk, but when these 2 effects are combined, the risk goes up to 80 to 90 times the normal value. It may well be even greater if another pollutant is added.

Similar synergistic effects could occur between any number of pollutants.

Air pollution also affects plant growth. Damage to plants has been recorded when they were subjected to low levels (0.1 parts per million) of ozone for a few hours daily for a few months. These levels are common in large cities and have recently been reported in a relatively rural area in Britain. Brisbane levels do not yet exceed 0.05 parts per million, but increasing car registrations will presumably increase this figure.

CARBON DIOXIDE

Carbon dioxide levels in the atmosphere have increased by approx. 10% since 1880 and it is predicted that they will increase another 20% by the end of the century. It has been claimed that this rise has been due to fossil-fuel burning, but this is not clear.

It is suggested that increased CO₂ levels will decrease re-radiation of solar energy from the earth's surface and thereby raise global temperatures. A similar effect may result from increased particulate matter in the atmosphere, but it is also suggested that a further increase may decrease radiation to the earth.

An increase in the global temperature may release CO₂ from the oceans, and, if the theory is correct, this would further increase

temperatures and so on.

THERMAL WASTE

Another contributor to global temperature could be thermal waste, especially from power plants. Thermal waste energy is rising at the rate of 5.7% each year, which will mean a 5 fold increase by the year 2000. This waste energy is about 50% higher for nuclear power plants than for fossil-fuel plants.

Another problem associated with the change to nuclear energy is the accumulation of radioactive wastes. This may itself present increasing technological difficulties as well as increasing the risk of contamination of the environment.

All these predictions assume that industrial growth will continue.

Energy demand in U.S.A. (35% of the world total) will increase about 5-6 fold by 2000 if growth continues. That country apparently has every intention of trying to meet this demand - and in the process to convert to nuclear energy. There is no suggestion that industrial growth should be curbed.

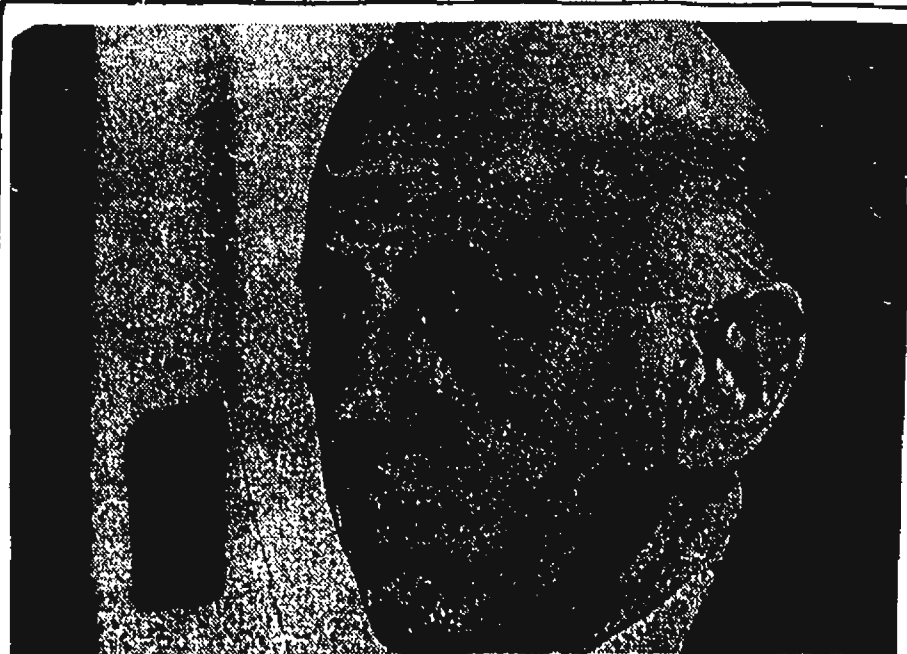
Given continuing industrial growth, it is almost certain that industrial pollution will increase. Even if the pollution level is reduced to 20% of the present level, with a 6% growth rate, it will take only 26 years to get back to the same level. With the delays involved in legislation and subsequent enforcement, it is likely that we will see, in U.S.A., at least, a relatively brief lull in pollution and then continued increase.

I have described a range of factors which are affecting ecological systems or are suspected of doing so, or, the long term effects of which are unknown. The American ecologist, Barry Commoner, has said that we are carrying out a huge experiment on the biosphere and on ourselves. We don't know what the results will be, but there are indications that they will be positive, irreversible on any useful time-scale, and, disastrous. We not only continue with this experiment, we constantly broaden its scope and increase its intensity.

To continue with industrial growth will not only increase the ecological disturbance, but may mean that when we are forced to face the problems and find solutions, we may at the same time be trying to find solutions to the financial and technological problems of developing alternative energy and transport systems. We presume that we have not yet reached the point of no return. We don't know when it will come, and we may well have no way of recognizing it when it does come - until, of course, it is too late.

One may consider that the crisis point is the actual point of no return - but given the resistances and delays built into the system, the real crisis point is long before this. I believe it is now.

— Keith Scott.



"I didn't heed the pollution warnings and look what happened to me"

Pollution 2

quenching man's thirst

by
Luscombe White

World demand for fresh water is soaring. Even in temperate countries with advanced supply systems the growing demands of new industries and water consuming domestic appliances are beginning to tax natural resources.

In many tropical lands lack of fresh water is retarding urgent social, industrial and agricultural development.

To remedy this by conventional supply schemes would sometimes involve impossibly large capital outlay. So an alternative is "manmade" fresh water, produced by distillation and other processes from sea water, brackish or contaminated rivers, lakes, boreholes and other sources.

COSTS CUT

This has already been adopted widely in circumstances where special demands justify special methods.

In virtually waterless but oil-rich Kuwait for example fresh water shipped from the nearest natural source would have been prohibitively expensive.

But sea water desalination plant, much of it supplied by British firms, is now producing vast quantities at only a fraction of this cost.

Experience gained in designing and building such plant and intensive research into new and improved techniques are progressively lowering the cost of desalination. In some circumstances this is already an economic proposition compared with damming, drilling, reservoir construction and other conventional schemes, if these are possible. Future possibilities are promising.

An important part in promoting desalination technology and maintaining the position of Britain's industry, which has supplied a large

proportion of the world's water production plant, is being played by the United Kingdom Atomic Energy Authority (UKAEA), working in co-operation with leading plant manufacturers.

TWO OBJECTIVES

When the British Government sponsored a desalination research and development programme in 1965 UKAEA was asked to play this part because the expertise it had acquired in advanced nuclear technology was relevant to desalination plant design. Two objectives were set - further development of the multi-stage flash distillation (MSF) process, then the preferred technology, and exploration of other methods which might later supersede it.

Since then, the UKAEA and its chosen partner firms have worked together closely. Each side has full access to results of research into shared projects and other industrial partners can exploit them commercially, so that technical advances can rapidly be transformed into commercial working plant.

The value of such state-industry co-operation has been shown by the increasing efficiency of British plant. A striking example of this was the recent announcement by Aiton and Co. Ltd (Whessoe Group) of its latest desalination plant.

This will be the first commercial example of its type to be built anywhere in the world and will produce fresh water at an overall production cost significantly below that of the most efficient existing distillation equipment. It will also generate virtually all the electricity required by the desalination station.

The new Gibraltar-type plant is the direct result of

research and development work carried out by the manufacturers and the UKAEA in collaboration. The mutual aim was to extend the efficiency and economies of all types of multiple effect plant.

Experimental work was devoted to a new "falling film" system of evaporation, in which the sea water is allowed to flow as a thin film down the internal walls of steam-bathed tubes; into the best ways of producing evenly spread films; into the composition and shape of the tubes themselves.

PERFORMANCE PROBED

The vitally important heat-transfer performance of different designs of fluted tube was studied in depth. As a result new tube profiles were evolved with heat-transfer coefficients at least three times those of plain tubes.

Such advances will considerably reduce the heating surfaces which represent the biggest single item in a plant's capital cost required for a given output.

Other research was devoted to general problems of heat transfer, fluid flow, corrosion and formation of scale.

Large scale work by the company included the construction and operation, by permission of the Central Electricity Generating Board, of a prototype plant at Dungeness A nuclear power station. This is a double effect installation, complementary to the design chosen for Gibraltar. The firm has also installed three commercial distillation units, with a total output of over 570,000 gallons a day, at Dungeness B nuclear station. These will operate with heat supplied by the station's boilers.

Gibraltar's new plant will incorporate many advances resulting from mutual research and development. It will have 13 effects, through which the sea water will flow in series, with partial evaporation in each and final concentration in the last minimum temperature stage. Each stage will employ the latest double-fluted tubes with much higher heat transfer qualities than those in existing plants.

It will be supplied by an oil-fired boiler with heating steam of higher temperature than that required for distillation alone - in which relatively low temperatures are used. The surplus energy will be absorbed by a turbo-alternator set producing electricity for the station.

The alternator will be fed directly from the boiler and its exhaust will pass into the first stage of the distillation plant. This combined operation is thermodynamically efficient and its production of current will reduce water-conversion costs.

Sea water contains not only common salt but also considerable amounts of magnesium and calcium compounds. These cause scale formation and other problems, with lowered

efficiency and maintenance complications, if left untreated.

GIBRALTAR'S ORDER

The first order for this highly advanced plant, which is of the latest multiple-effect vertical straight tube (MEVST) type, has come from the Government of Gibraltar. It is for a \$810,000 sea water distillation plant producing 300,000 gallons a day of fresh water, which will be pumped into the main water supply.

The comprehensive contract covers desalination and pretreatment plant, oil-fired boiler, turbo-alternator set, ancillary equipment and buildings. The installation which could be the first of many should be completed by December, 1972.

This company has been designing, building and installing desalination plant for over 45 years and has now more than 350 in operation in 30 countries, producing about 22 million gallons a day.

STRONGLY FAVOURED

It has pioneered many developments, especially in MSF and MEVST types. The first type was a pacemaker in economy and reliability from its introduction in Britain in 1957, and by 1970 a major share of total world capacity was composed of British built or developed MSF plant. In its latest forms it is still strongly favoured for many applications.

Briefly, the MSF process involves heating brine under pressure and then injecting it into a series of flash (evaporation) chambers working at successively lower pressures. Some of the brine evaporates immediately in each chamber and is then condensed on tubes carrying feed sea water towards the steam heated input section.

The feed, therefore, is progressively heated on its way. The condensed brine vapour is collected on trays in each section and is drawn off as fresh product water.

LOW-GRADE HEAT SUPPLY

One advantage of this process is that it can operate at high efficiency with a low grade heat supply, such as low pressure steam, diesel engine cooling water or reformer exit gases. The company put the first commercial flash evaporator commissioned in Britain into service in 1959 and was the first to use reformer exit gases as a heating medium.

Gibraltar's new plant will be of the MEVST type, now considered more attractive because of its greater use of available temperature difference, high possible operating temperature and large heat transfer coefficient. In the first "effect", or stage, of this multiple effect process steam from a boiler is used to evaporate sea water flowing inside bundles of vertical heat-exchange tubes.

This original steam condenses on the outsides of the tubes and is recovered as water. The fresh steam generated from the circulating brine is piped into the next stage, where it evaporates more brine to produce steam for the following stage and so on.

At each stage the condensed steam is drawn off as product water. When, after the last stage, the vapour reaches a

temperature too low for further useful work, it is condensed separately by outside cooling water.

ACID INJECTIONS

The sea water therefore will be treated with injections of acid before being fed in. The gas produced by the resulting reaction will be removed in a special degassing unit. This arrangement, which also minimises corrosion, has been used successfully by the company in a

number of recent projects in Europe and the Middle East.

Another innovation will be the use of plastic water boxes for all parts of the sea water circuit. These have complete resistance to corrosion and are light and relatively inexpensive.

The plant should prove extremely reliable, long lived and simple to operate, inspect and maintain. Full automatic control while on load is provided.

PETITION

I/We, the undersigned students of the University of Queensland, have resolved that the Brisbane Public Interest Research Group (B-PIRG) be established, and hereby petition the Senate of the University of Queensland to authorize the formation and funding of B-PIRG.

I/We understand that B-PIRG will be a nonpartisan, nonprofit, and student controlled organization which will investigate, publish, recommend to government, and in any other lawful way necessary, pursue the concerns of students on issues of general public interest, including such things as consumer affairs, the rights of minority groups, and the environment.

I/We also understand that B-PIRG will be financed by a student fee of one dollar per student per term, provided that any student not wishing to support B-PIRG will be entitled to a refund of the fee, from B-PIRG, within one month of the closing date for fee payments.

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More Pollution Under Control

Pollution 3

NADERISM

The Brisbane Nader Committee is taking the first steps toward setting up a Public Interest Research Group (P.I.R.G.) here, by circulating a petition on the University campus which calls on the Senate of the University to authorize the creation and funding of it. The funding will be a fee of One Dollar per student per term, which will be collected by the administration and paid directly to P.I.R.G. About 5,000 students have so far indicated their support for the group by signing the petition, and many are helping with the projects already underway. The funds, when they are collected, will be used to pay for the services of a small office staff, as well as a professional group to initiate, co-ordinate, organize and translate into social action, the activities of large numbers of people in all sections of society engaged in carrying out the research priorities of the P.I.R.G.

Because it is funded by students, the P.I.R.G. will be student controlled, however, this is not expected to prove a barrier to the financial support, and the participation in P.I.R.G. projects, of people from all sections of the community. Many donations have already been made, and any others will be non-profit and not politically aligned. Some students at the Queensland

Institute of Technology and the Teachers' Training Colleges have shown interest in joining P.I.R.G. Many of the staff of these institutions, as well as at the University, have expressed interest in initiating and participating in P.I.R.G. projects. Nearly 700 public citizens from all walks of life within the community, including many with special expertise, have expressed their interest in helping. Already many of these people are actively engaged in projects and it is hoped that others throughout Queensland will start work under the auspices of P.I.R.G.

A P.I.R.G.s is a body of concerned public citizens who join together to initiate social research, utilize existing research findings and information, and carry out social action to bring about the positive restructuring of society, and of the public's attitude to pollution, consumer affairs and many other problems which confront the community.

A great deal of useful enquiry is, of course, already done but all too frequently the findings are lost or shelved and rarely carried into social action because the efforts of those engaged in the work are sporadic, badly directed or are not designed to produce a social benefit. The P.I.R.G.'s professional staff

should provide the continuity of effort and understanding necessary to make the work of Queensland's public citizens truly effective.

In order to achieve the widest possible interest and activity in the community the part time and external students especially are at present being approached to sign the petition and to initiate research in their own occupations, and home districts throughout the State. They have a unique role to play in maintaining contact between the University and the world beyond the campus and Brisbane City.

Action for Change

A small group of students joined together in the summer vacation of 1971-72, and examined the legal and other aspects of pollution and conservation in Queensland. As a result of that work a report was produced called "The State of Queensland", and it enjoyed immediate popularity. The revised edition will be published shortly as a book.

The report was released concurrently with a visit by the consumer's advocate Ralph Nader which was organised in Brisbane by the research group and proved a tremendous success. The goodwill and interest shown then indicated the need for a mechanism to harness the individual and

local group efforts of the public citizens of Queensland, so that their collective expertise and influence could for the first time be effectively utilized.

Among the many pieces of research currently in progress is a food prices survey being conducted in supermarkets throughout Brisbane to find out the comparative costs of shopping in different major chains, the comparative costs of different shops within these chains, the comparative costs in different suburbs, and the level of price inflation in supermarkets generally. Until shoppers have this sort of information they will always be at a disadvantage when making their decisions about where it is best to buy. The study is employing the energies of hundreds of people to survey the prices of a selection of everyday food items, each week for the next three months. In the near future it is expected that more people, from all over the State will be recruited to participate in the gathering of prices, so a comparison of food costs between different towns and cities will then be possible too.

P.I.R.G. conducted a pilot survey in 40 Brisbane Supermarkets at the end of July which included twenty five frequently purchased items.

The results obtained

suggest that large price differences do exist between supermarkets, but that only a systematic and long term study, similar to the one recently carried out in Canada, will produce sufficient information to be of tangible benefit to consumers. Some important areas of related inquiry have also been found and these will form a part of the study too. The labels and tickets on some of the products, including tinned soup and vegetables, show that manufacturers are getting hidden price and profit increases by reducing the weights of their commodities while leaving the prices static. The metric conversion is being used in some cases to disguise the fact that this is being done, and even some shopkeepers seem unaware of the changes.

The misleading packaging of goods is extremely prevalent too, and this aspect of marketing will be examined with special attention being paid to those goods which are not weight marked or are made to appear larger than they really are. These include such things as cakes of soap and toothpaste. Complaints on specific cases of deception and unfair practices found will be laid with the Consumer Affairs Bureau, and the effectiveness of the Bureau in rectifying these matters

will be assessed for further action if necessary.

The value of the Government's Consumer Price Index as a guide to the cost of living will also be examined with a view to having it made more relevant to present buying patterns, and a more satisfactory measure of the adequacy of existing incomes.

Chapter's on the corporate and economic aspects of the retailing industry, on food additives and their influence on the quality and safety of food, and another setting out proposals for change will also be in the final report. The Research Group would appreciate hearing from any one at all with something to contribute to these. Although the complete results of the study will be published at the conclusion consumers will be informed of anything of special importance as soon as the finding is known.

Many people are currently formulating plans for the projects they hope to undertake in the future. Students in particular, tied to their study during the year, but with a long vacation ahead, are preparing to research and report on the problems which are of most interest and concern to them. In several areas the residents are preparing to act on their own behalf to conserve the natural characteristics of their environment, and to demand a halt to, or the rigorous control of, the polluting presence of industrial, mining, and other enterprises near the

places where they live and work. An examination of the safety of workplaces, as well as the presence of other hazards to human health, is being prepared by students for their vacation jobs, and any other workers interested in reporting on these things should contact the P.I.R.G. These are merely examples of the multitude of research and action in progress.

Those public citizens who are enquiring into a social problem, or seeking to take action on it, as well as those interested in initiating a project, or keen to join one that is already in progress, should get in touch with P.I.R.G. In the files there are the names of hundreds of people ready and willing to assist with Public Interest Research and also a note of the many currently engaged in work. These are available to bona fide people needing contact with others of similar inclination.

P.I.R.G.'s address is:-
The Public Interest Research Group
Post Office Box 120,
Indooroopilly, 4068.
Queensland.
Phone 711377 Ext. 8454.

or Room 115 in the Main Building at the University.

Please sign and send to P.I.R.G. the attached petition form if you are a University student and have not yet had an opportunity to sign the main petition.

SEE PAGE 11

PROJECT

To make people aware of the dangers of pollution.

The car sticker, based on the international ecology symbol, and using the environmental colours - yellow (earth), green (water), and blue (sky) is designed to assist recall of the Cause.



Pollution 4

THE RIVER THAT GOT BACK ITS PURITY

by
Dr. Margaret Varley
Senior Lecturer
in Biology
The Open University,
England

Twenty years ago the River Derwent below Derby, in the English midlands, was a dead river. The water was grey and oily, with tufts of sewage fungus floating in it. Bubbles of methane and hydrogen sulphide gases rose from the black mud of the river bottom. And the water was hot, especially in winter when darkness falls early.

Today, this river provides drinking water for a city. It holds plenty of fish, giving sport to local angling clubs, and it is fringed with a wide variety of plants.

The transformation has cost a lot of money. But it proves that rivers anywhere can be rescued from pollution when the will exists.

COURT ACTION

The story began in 1951 when two fishing clubs and a riparian owner, supported by the Anglers' Co-operative Association, brought an action in England's High Court. They sought injunctions to prevent three defendants from altering the quality of the river water. And the injunctions were granted, with damages to compensate the angling clubs for loss of fishing.

The three defendants were a city corporation whose sewage disposal works was old fashioned and overloaded; a large

chemical factory producing waste organic matter and hot condenser water; and a power station discharging hot cooling water.

Their combined discharges, all three within a mile or so of each other, added up to a very high BOD (biochemical oxygen demand) in water often more than 15 degrees centigrade warmer than the river above Derby.

The effect of this high BOD was to encourage the prolific growth of sewage fungus in the river. This used up all the oxygen in the water so that the organic matter broke down anaerobically, producing stinking black mud from which gases bubbled up.

Even if there had been enough oxygen, the fluctuations in temperature would have made the water unsuitable for most organisms.

REMEDIES CLEAR

The remedies were clearly to reduce the load of organic effluent and the amount of hot water being discharged. This meant reconstruction of the sewage disposal works, construction of cooling towers, and redesign of parts of the factory and power station. The total cost ran into millions of pounds sterling.

The problem was how to treat the effluent from the factory at the sewage disposal works so a small

pilot sewage plant was run with various mixtures of domestic sewage and trade effluent.

The "activated sludge" method was not successful. But fortunately a regime of alternate double filtration of the mixture produced high quality final effluent. So the new sewage disposal works was designed for this system of treatment.

REGULAR SURVEYS

To monitor the effects of their alterations the city and the factory asked me to make regular surveys of the animals and plants in the river. Chemical analyses reveal conditions that exist at the moment the water samples are collected - whereas chemists test for substances that they expect to be present, so it is possible that they can overlook unexpected pollutants.

A biological survey gives a more reliable picture of the state of the river as the organisms present are those that can survive the worst conditions that occur. Fishes are less satisfactory as indicators than are river bottom fauna because fish can often swim away when conditions become unsatisfactory and return when they improve, but the invertebrate animals and the plants have to live there all the time.

The River Derwent is

not easy to survey because it has a fast current with minimum flows of about 100 million gallons a day and the bottom is sometimes hard clay, sometimes mud, sometimes stones and gravel. A healthy river would have different sorts of animals on these types of bottom so all have to be sampled separately. The same applies to the plants, either emerging near the banks or submerged in the water.

IMPROVEMENT SHOWN

While the sewage disposal works was being rebuilt - a period of seven years - the amount of hot water discharged was reduced by the construction of cooling towers. The organic effluents were partially treated by sedimentation.

There was still a high BOD in the water and prolific growth of sewage fungus. But sampling the river bottom deposits showed that there had been an improvement.

The mud was no longer black and stinking all the way down but much of it was now brown and full of small red worms (Tubificids). In some places there were very large numbers of "bloodworms" (red midge (Chironomid) larvae).

Although both these species can live where there is little dissolved oxygen,

they cannot survive where there is none. They stir up the mud as they feed on the bacteria and organic matter in it - and gradually they can disperse deposits.

Soon after the new sewage disposal works came into operation the bottom fauna began to change. There was still sewage fungus near the outfall and Tubificid worms and bloodworms in the mud - but a predatory leech (Erpobdella) became numerous, no doubt feeding on the worms and bloodworms. The water slater (Asellus) and some snails were found living in the few clumps of reeds near the banks.

A dramatic change was the appearance of fishes along the whole stretch of river. Anglers reported catching fish regularly in the two miles above the confluence of the Derwent with the River Trent. Above that the situation was unpredictable.

Three years later slaters and leeches were the most common animals in the Derwent, both species being present in large numbers. Bloodworms were still common in places and there were several species of snails among the plants. I caught a few freshwater shrimps and a few insects such as dragonfly nymphs.

The most striking

change in the past 10 years has been in the flora. Clumps of bur-reed and flowering rush have spread to form a fringe of emergent vegetation along most of the length of the banks.

Various pondweeds grew in the water where it is sufficiently shallow and arrowwort has appeared in places. These plants support many kinds of snails and a variety of leeches of different species that live on the snails. The predatory leech Erpobdella and the slater Asellus are still numerous but do not dominate the fauna as they did ten years ago.

Bloodworms and Tubificid worms are common only in backwaters and in very deep, muddy stretches. I have collected caddis larvae and mayfly (ephemeropteran) nymphs - animals characteristic of clean rivers.

In fact, if I had first visited the river in 1971 I would have diagnosed it as suffering from mild organic pollution not serious enough to worry anglers who want to catch "coarse" fish such as roach and chub. Small fish are now common all the way below the sewage outfall and it is clear that minnows and sticklebacks breed successfully, suggesting that other species do too.

An accidental but

serious pollution from the factory in October, 1971, confirmed that the river held plenty of fish. About 10,000 large fish, averaging about half a pound were killed - mostly roach but also large numbers of chub and dace.

DRAMATIC

Altogether, the change has been dramatic. Today the River Derwent below Derby is being used as a source of drinking water for the city of Nottingham! Water is pumped out of the river into a storage reservoir and later treated and distributed to the city.

So, in 20 years, a river that was heavily polluted and held no fish has been transformed. The angling clubs that sought the injunctions in 1951 have had their angling restored and the community at large has benefited because the water from the Derwent improves the condition of the polluted River Trent.

The same sort of exercise in river improvement is being attempted in other parts of the Trent area as well as in other British rivers. It shows that if the community decides that clean water and recreation are worth the cost of capital investment in works and equipment by cities and industry, then dirty rivers can and do recover from pollution.

The disastrous Automobile

The following article is reprinted from a paper by E. J. Mishan of the London School of Economics, entitled: "Pollution, economics and liberalism".

The first of these sources of spillover is the private automobile. This writer once said that the invention of the automobile was one of the greatest disasters to have befallen mankind.† He has had no cause to revise that judgment. Almost every principle of architectural harmony has been perverted in the endless struggle to keep the mounting volume of motorised traffic moving through cities, towns, resorts, villages, and, of course, the ever-growing suburbs. Clamour, dust, fume, congestion, and visual distraction are the predominant features today in all built-up areas. Even where architecture differs - and it differs less from year to year - these traffic features impinge so blatantly and so persistently on the senses as to blot out the more traditional associations. Whether in Paris, Chicago, Tokyo, Düsseldorf, Milan or Sydney, it is the choking din and the endless movement of motorised traffic that dominate the scene.

For all that, our psychological dependence upon the automobile has not declined: automobile advertisements continue to depict it as a thing with sex appeal, as a status symbol, as a virility symbol. We have also mesmerised ourselves into the belief that we are economically dependent upon it. Our physical, or environmental dependence upon the automobile is no longer in doubt; its being the direct result of its adoption.

Our cities and suburbs have as a consequence expanded without pause, for the last quarter of a century, promoting a demand for massive road-building projects that further encourage the flow of traffic. The most attractive bits of countryside are built on in architecturally indefensible ways, and no matter how far we travel it seems no longer possible really to get away. Speeding along the multi-laned highways in the U.S.A., the isolated motorist sees nothing but other cars, vast hoardings and outsize "drive-ins". Such "developments" are an outrage to all sense of propriety and proportion. They numb the spirit, weaken the body, and sour the humour.

One could go on, for the extent of its subversive influence is virtually unlimited. Innocent drivers kill off other people at the rate of about 150,000 a year (55,000 a year in the U.S.A. alone), and permanently maim about a million. Through the emission of some millions of tons of foul gases in the cities the automobile's

contribution to sickness and death from cancer and from bronchial and other disorders is only beginning to be understood. The post-war tourist boom required the full co-operation both of the automobile and the air liner, and got it.

And not only has the physical environment and economic structure of each Western country been transmogrified to accommodate this infernal machine, but inevitably also our whole style of life: the sort of food we eat, the clothes we wear, the way we court, the forms of entertainment bear its stamp. Indeed, our speech, our manners, our health, and our character have all been cramped, and distorted in order to maintain the momentum of an industry whose chief visible achievement has been to transform a society of men into a teeming swarm of motorised locusts that have already eaten the heart out of their towns and cities and now scurry hungrily over the captive earth along bands of concrete spreading in all directions. The better life we overtly aspire to - and the ease, space, leisure, beauty, and intimacy that are conceived as essential features of such a life - can never be realised in the automobile economy.

In view of its far-reaching and interconnected influences on modern society, a proposal to evaluate the full range of the baleful spillover effects of the automobile is too ludicrous to contemplate seriously; alike the application of the notion of optimality. A large political decision is called for: either to continue building roads and automobiles until something gives (we shall have to wait long), or in some degree to de-scalate - to promote the changeover from private to public transport and to direct the resources released from automobile production to the rehabilitation of our cities and suburbs. A minimal programme would begin by clearing all motorised traffic from central areas in the larger towns and cities (deliveries of merchandise taking place, provisionally, during the small hours of the morning) and, as already suggested, the establishing of completely motorfree residential areas for those who would choose to dwell there.

The second source of spillover which is likely to cause difficulties are those risks that arise in the operation of new technical processes and in the creation of new products, more particularly chemical products.

† *The Cost of Economic Growth* (Staples Press, London, 1967). See also in this respect, *The Motor Car and Politics*, W. Plowden (Bodley Head, 1971).

4BC

Radio 4BC, in conjunction with other network stations throughout Australia has been promoting an anti-pollution campaign recently.

The present theme of the campaign has been to make average members of the public aware of the need for them to co-operate in the fight against pollution.

The campaign from the point of many University students may appear to be aimed too low and might seem to be laying off the big polluters.

The Manager of Radio 4BC, Mr Max Baker told SEMPER FLOREAT: "What we must all realize is that most people are not yet aware of the dangers of pollution. Our aim at 4BC is to drive home to people the immediate threats of pollution, not in a hard hitting, anti-industry attack, at first, but with a campaign aimed at each individual".

Mr Baker said that it might appear that 4BC was using the pollution campaign as a means of boosting its own image. "However," he said, "we at 4BC are just as concerned as anyone else with the pollution problem".

"Pollution is such an important issue that it requires people and organizations throughout society to co-operate.

"We have been receiving a great measure of support from the public over our campaign."

Mr Baker also said that the emphasis of the campaign would slowly change from the softsell approach to one with a greater emphasis on all aspects of pollution.

Mr Baker said: "I think most people will see our campaign not as an attempt to use pollution for our own benefits but in a genuine endeavour to assist the world wide fight on this menace."



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POLL RESULTS

Radicals win in big poll

swing
from
right

Radical students have won at least two-thirds of the positions on the incoming Union Council.

The 58-member Council will take office on December 1. Mr. Lewin Blazeovich, a post-graduate Biochemistry student, has been elected President.

The win by the radicals has been hailed as the greatest defeat for moderate students in recent years, in the Union.

One prominent radical who stood on a Communist ticket in the elections told a SEMPER NEWSMAN: "We have

won now. That's all we had to do. We are going to change the rules. The radicals will never lose again."

The radical caucus has been having secretive meetings to determine its strategy for the coming year. Plans are underway to capture almost all the non-voting positions at the Special Election Meeting.

One student official commented after the election results that the students would see the folly of their ways next year when the radicals

spent exorbitant sums on useless political causes.

Its expected that the 1st meeting of the new Council will be held early in December.

ALL THE RESULTS

Executive:

PRESIDENT: Mr L. K. Blazeovich
GENERAL VICE-PRESIDENT: Mr. M.C. Swan
ST. LUCIA FULL-TIME VICE-PRESIDENT: Mr. G.L. Jones
ST. LUCIA PART-TIME VICE-PRESIDENT: Ms. A.J. White
HERSTON AREA VICE-PRESIDENT: Mr. R.P. Brown
TURBOT STREET AREA VICE-PRESIDENT: Mr. D.M. Christensen
HONORARY TREASURER: Mr. M.W. English
HONORARY SECRETARY: Mr. W.P. Abrahams
A.U.S. SECRETARY: Mr. B.V. Shaw

FACULTY REPRESENTATIVES:

AGRICULTURE: Mr. W.P. Thompson
ARCHITECTURE: Mr. R.A. Smith
ARTS (Full-Time) (5): Mr. M.J. Birgan
Ms. J. Clark
Mr. A. Grieve
Mr. R.C. Poulsen
Mr. R.F. Shearman
Mr. P.R. Bethune
Mr. A. J. Frazer
Ms. D.J. Lange
Mr. C. Lucas
Mr. H. Woodrow
COMMERCE (Full-Time) (2): Mr. C.B. MacLean
Mr. P.F. Trapnell
COMMERCE (Part-Time) (2): Mr. P.D. Ashton
Mr. A. Crosbie
DENTISTRY: Mr. E.P. Swan
EDUCATION (Full-Time): Mr. J.W.B. Hungerford
EDUCATION (Part-Time) (2): Mr. G. Atkinson
Mr. J.S. Fraeland
ENGINEERING (3): Mr. J.G. Flynn
Mr. O.L. Groeneveld
LAW: Mr. K.F. Boulton
MEDECINE (5): Mr. B.L. Bell
Ms. L.C. Fong
Mr. I.R. Gardner
Mr. M.E. O'Shea
Mr. D.K. Wedgwood
MUSIC: Mrs. S. Blazeovich
PHARMACY: Mr. J.M. Moffat
SCIENCE (Full-Time) (2): Mr. J.W. Arrowsmith
Mr. B.M. McKavanagh
SCIENCE (Part-Time): Mr. J. Pasmore
VETERINARY SCIENCE: Ms. C. Blaz
COLLEGE (2): Ms. J. Brazier
Ms. J. Brazier
Mr. I.G. Wilson
POST-GRADUATE (3): Mr. H.D. Campbell
Mr. A.E. Clague
Rev. S. Freshwater
OVERSEAS STUDENTS: Mr. Morgan Lin

EXECUTIVE

President

Berry	288
*Blazeovich	1804
Clarke	100
Lewis	691
McKeown	656
McRae	36
Murr	1474
Tully	432
Informal	15
TOTAL	5501

General Vice-President

Bradley	1474
*Swan	3927
Informal	192

Honorary Secretary

*Abrahams	3040
Greenwood	1615
Informal	189

Honorary Treasurer

*English	3493
O'Brien	1989
Informal	189

Area Vice-President

St. Lucia (Part-Time)	
Chant	456
*White	1408

Area Vice-President,

Herston	
*Brown	160
Dorrington	157
Pashen	157

Area Vice-President,

Turbot St.	
*Christensen	40
Marshall	27

Area Vice-President,

St. Lucia Full-Time	
Byram	1120
Hardy	514
*Jones	1642

Local A.U.S. Secretary

Carter	1772
McCallum	917
*Shaw	2621
Informal	256

Union Council at its last meeting, accepted the results of the Annual Elections as declared by the Electoral Officer (Mr. Michael Richards).

The Electoral Officer's Report was accepted by Council without any amendment.

No adjustments were made to the actual results of the elections and all appointments were ratified by Council.

During the debate, the Part-time Arts Representative on Council (Mr. Paul G. Tully) objected to the

competence of Council to discuss the elections. Mr. Tully said that the Regulations were quite explicit - the results of the Annual Elections could only be discussed at the Annual General Meeting in October.

The Chairman (Mr.

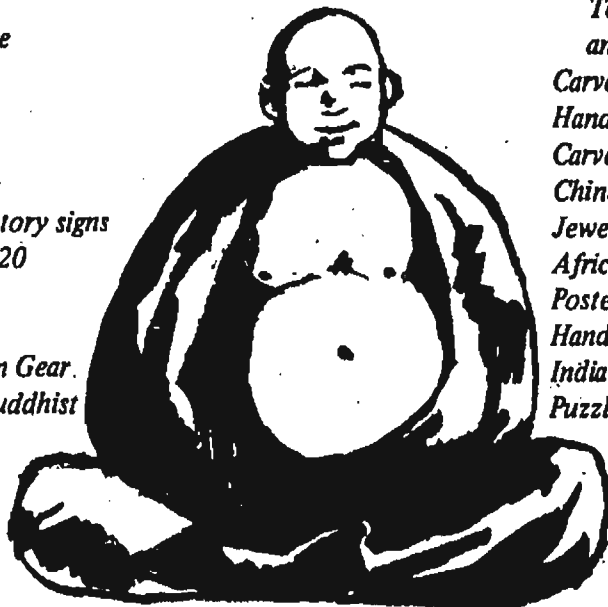
Swan) said that as the matter was doubtful he would allow debate to proceed, but indicated that it would have to be re-debated at the Annual General Meeting.

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many women
may reprom

UNION COUNCIL SHOCK

The Editor of SEMPER FLOREAT will no longer be paid an allowance of \$2,000. This was decided at the last meeting of Union Council.

A motion to this effect was moved by the Chairman of the Legal Standing Committee and Arts Part-time Representative on Council (Mr Tony Frazer) and seconded by the St. Lucia Part-time Vice President (Miss Ann White).

The motion met with strong opposition from the Electoral Officer (Mr Michael Richards). However, it is rumoured that Mr. Richards may be standing for election to the editor of a certain University Newspaper.

It was pointed out by the present Editor (Mr Paul C. Tully) who retires on

November 30, that all this does is to protect the Union from legal action if it cannot afford to pay the Editor.

Mr Tully said that it would still be competent for next year's Council to pay the Editor.

After the meeting, Mr Tully said that he had no intention nominating as Editor of SEMPER FLOREAT again. He said: "Although most students would undoubtedly prefer me to a radical, I think that I have contributed enough to the Union per medium of Semper Floreat".

OFFICIAL

UNIVERSITY OF QUEENSLAND UNION

Have you ever thought of being the Editor of next year's Semper? Perhaps you're a legal brain - have you thought of advising the Union? Are you a wizard of an accountant who can juggle any figures? - the Union needs you!

Every year the Council you elected in July has to choose people to assist it in the many and varied jobs in directs. This is your opportunity to volunteer. The 62nd Council (that's the new one) will hold its Special Election Meeting at 6.30 p.m. on Thursday, 12th October in the J.D. Story Room. Nominations (except for Editor of Semper Floreat close at the start of the Meeting. Please note that the nominations for Editor of Semper Floreat close at 5.00 p.m. on Thursday, 28th September.

1. The Editor(s) of Semper Floreat
2. Finance Secretary
3. Finance Advisory Committee - 5 members
4. The Auditor
5. The Electoral Officer
6. Two (2) Assistant Honorary Secretaries
7. Union Theatre Committee - Chairman, 4 members of the Union
8. Drafting Secretary
9. Local Cultural Affairs Officer
10. Local Social Action Director
11. Legal Standing Committee - Chairman, 5 elected members
12. Accommodation and Housing Committee - Chairman, 4 elected members
13. Union Health Officer
14. 6 members of the Student Benefactions Committee
15. Nominee on Union College Council
16. Representative on the Board of Governors of International House
17. Two (2) members of the Disciplinary Committee
18. Editor(s) of Commem Semper
19. Editor(s) of Whacko
20. Commem Week Activities Committee - Chairman and 3 other members
21. Clubs & Societies Committee - Chairman, 5 elected members
22. Publications Committee - Chairman and 3 other members
23. Union Transport Officer
24. Public Rights Committee - Chairman and 5 other members
25. A.U.S. Local Welfare Officer
26. A.U.S. Local Education Officer
27. Education Committee - 9 members
28. Library Liaison Committee - Chairman and 2 other members
29. Incoming Delegations Officer
30. Activities Director
31. Union Nights Committee - Chairman and 5 members
32. Guest Speakers Committee - Chairman and 2 members
33. Concert and Recitals Committee - Chairman and 2 members
34. Fine Arts Committee - Chairman and 3 other members
35. Music Room Committee - Chairman and 2 members
36. A.U.S. Local Travel Officer
37. A.U.S. Local International Officer
38. 2 National 'U' Correspondents
39. A.U.S. Local Papua New Guinea Officer
40. A.U.S. Standing Committee - 3 other members
41. 5 Delegates to the February Council of A.U.S. to include the President and Local A.U.S. Secretary were possible.
42. The Union Solicitor
43. Chairman, Expo-Uni Co-ordinating Committee
44. Assistant Orientation Directors (2)
45. Chairman of Union Council

Bill Abrahams
HONORARY SECRETARY

RACISM

Pat Miller,
27 Kevin Street,
EDGE HILL, Q. 4870
June 21, 1972.

Dear Sir,

I wrote what follows in hot anger, but this move in publicizing the following, I make in cold calculation.

For a great part of my life, I have heard various racist utterances, which at times I found exceedingly offensive, and suffered them in silence.

I heeded the advice of friends and others not to say anything; not to do anything which might "rock the boat". I believe that because I (and others like me) maintained my silence that numerous misdeeds have been perpetrated against various sections of the community and in particular against Aborigines.

I shall no longer keep silent.

For what follows, I wish to make it very clear that I shall not tender any form of apology to any person, neither in public nor in private.

On Wednesday, June 21, at approximately 3 p.m. the principal of Cairns High School requested that I attend him in his office ostensibly to discuss an application by me for leave of absence. During the course of his conversation with me he mentioned that one of the teachers on the staff had complained about my selling certain badges to children in the school.

I am of Aboriginal descent and all my life have identified myself as an Aboriginal person. I have no reason to deny my background and in fact can be proud of my heritage. Historically, Aborigines were an independent, proud and dignified race. The settlement of Europeans in Australia destroyed this. In fact many set out deliberately to physically destroy the Aborigines. The Europeans raped the Aborigines' land, destroyed their food and water resources, destroyed their societal structures, destroyed their health with the introduction of illnesses, violated their women. Can white Australians today be proud of their heritage?

Because of my own economic background and the depressed conditions under which I lived as a child, and which my relations, friends endure today, I feel that it is incumbent on me to commit myself to the cause of Aboriginal rights - land rights, human dignity, etc. So early in life, while yet a teenager, I joined the Aborigines & Torres Strait Islanders Advancement League.

At this school I have several times held meetings with the Aboriginal and Island children in an effort to give

them some sense of identity and worth, which many teachers do not concern themselves with. (Already I have heard it suggested that I may be trying to organize a Black Power group).

As part of my activities with these young people I have been trying to interest them in National Aborigines Day on July 14, by way of some sort of cultural display.

In other centres right throughout Australia, moratoria on Black Rights are being held, based on Aborigines' Land Rights claims.

Amalgamated Aboriginal groups have produced badges and posters advertising these, some of which I have.

The badge is a disk 3 1/2 cms in diameter in colours Black and Red with a central Yellow spot, symbolising the people, land and sun, bearing the motto "NINGLA A-NA" (in the Arunta language meaning "We are hungry for our land"). It also carries an advertisement "Black Moratorium March - July 14".

I brought these badges into the school to sell mainly to the Aboriginal and Island kids at 20 cents each. I have had a ready response from these young people, many of whom identify with me, FOR VERY OBVIOUS REASONS!

However this activity on my part apparently OFFENDS some one on this staff.

On what basis?

I have yet to hear any formal complaint from any teacher about the sale of Anzac badges, Legacy badges, or tickets in various raffles, etc., sponsored by various Church, Sports and Social bodies, through the school.

I do know that certain teachers have been heard to refer to Aboriginal kiddies in this school as "boongs"; and I know that certain teachers in this school have been heard to say that these people should not be here.

NO DOUBT ADMIRABLE SENTIMENTS FROM TEACHERS!

I am sickened by the hypocrisies uttered by such people.

I am sickened by the conspiracy of silence which exists among teachers, and I wish to divorce myself from these attitudes.

I wish to make known that I believe that certain person(s) with RACIST ATTITUDES have been responsible for the complaint about my selling these badges in support of a Moratorium for Black Rights on National Aborigines Day.

ABORIGINAL TEACHER, IN ANGER.

claim

by

woman

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ODG
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all hours service

1972 comp

New opportunities for national recognition are now open to young composers in Australia.

This was announced today by Professor Noel Nickson, Dean of Music at the University of Queensland, and President of the Australian Society for Music Education (ASME), who released first details of the 1972 Competitions for Student Composers which are being sponsored jointly by A.S.M.E. and the University of Western Australia.

Professor Nickson, speaking on behalf of ASME, said, "We are very pleased to be able to conduct this Second Series following the success of the First National Series in 1970. Prize-winning works will be considered for first performances in the Australian Composers' Workshops during the 1973 Festival of Perth, and thereafter may be publicly performed under ASME Chapter auspices throughout Australia. In addition, we are offering first and second prizes, ranging from \$15 to \$50, in each of the five categories of music in which the competitions are open; and also, bursaries for selected competitors to attend the Seminar for Young Composers during the 21st Festival of Perth in February, 1973".

Closing date for entries is 30th September, 1972.

EDITOR STUDENT ON ON STUDENT EDITOR BASH BASH CHARGE CHARGE

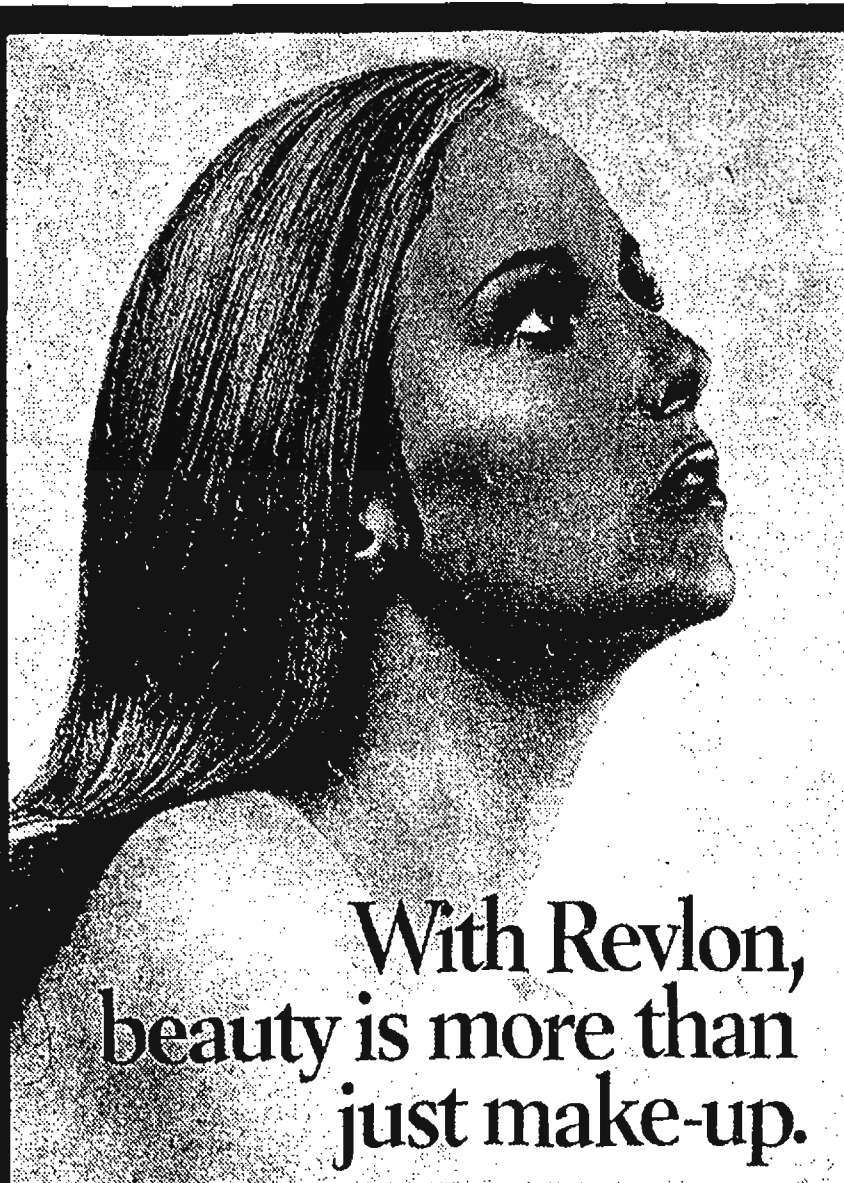
Charges against the Editor of SEMPER FLOREAT (Mr Paul G. Tully) for allegedly assaulting the AUS Secretary (Mr Bruce Shaw) have been dismissed by the Union disciplinary Committee.

Shaw had charged Tully with assault following an altercation in the Publication Secretary's Office on the first floor of the Union Building.

Tully admitted having removed Shaw from the Office, but claimed that under Section 277 of the Criminal Code he was lawfully entitled to remove troublemakers like Shaw.

The 2 charges against Tully, one of unlawful assault and one of illegal assault were dismissed, after the Committee sat 2 times to consider the matter.

Meanwhile, in the Brisbane Magistrates Court on 25th July, a summons against Bruce Shaw for allegedly assaulting Paul Gregory Tully at a Union Council Meeting on December 16 last year was withdrawn by Tully before any evidence was given.



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THE CAMPUS IN THE UNION ARCADE,
DOWNSTAIRS AT THE REAR OF THE UNION.

MR. ROD HUNT-SHARP WILL ASSIST YOU.

States of emergency

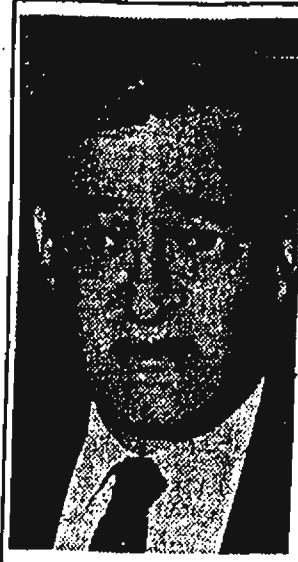
There recently passed first anniversary of Queensland's reaction to the Springbok tour - what one commentator called "a state of absurdity". Sufficient time has elapsed for tempers to have cooled and to evaluate, with some degree of objectivity - impossible at the time - who won what and where. Like Waterloo, the battle of the Boks demonstrates, that despite incompetent generals, wars are still won by those who have the numbers.

It will be recalled that the government issued its now famous Proclamation, ostensibly for the purpose of taking over the Exhibition Grounds, which were then being got ready for the Show, which experts regarded as the only grounds capable of sufficient fortification to enable the match to be played in relative safety, though in conditions reminiscent of a scenario from Hogan's Heroes. It is undeniable that earlier matches "down South" - Queensland's derogatory term for anything south of the Mason-Dixon line - gave indications that trouble could be expected; a view later fortified by Mr. Peter Hain, a former South African anti-apartheid agitator especially imported for the occasion from Britain, who, after one look at the Ballymore grounds previously selected for the match, pronounced it a "piece of cake". That was the last straw, and with a promptness not hitherto suspected, the government moved into action, proclaiming a State of Emergency. Not since the Gypie gold strike had Queensland been in such international focus. The existence of such arbitrary powers had been suspected amongst some of the minor Arab Sheikdoms, their emergence in the Sunshine State caused a ripple of surprise. It must be remembered that these emergency powers to take over a football ground and enlarging the powers of the police were assumed, not by parliament which was in recess, but by cabinet. How can a gaggle of ministers have such powers, lawyers and civil libertarians asked. The answer was to be found in sec. 22 of the State Transport Act of 1938, a section intended to grant "emergency powers" at a time of national crisis "whether by fire, flood, storm, tempest, act of God - (and, apparently Springboks) - . . . whereby the peace, order, good government or the public safety of the State or any part thereof is likely to be imperilled." Many commentators questioned the validity of the proclamation. This writer was asked by A.B.C. national radio to give the news commentary that night. Later that day, President Nixon announced his intention of visiting China. Surely, I thought, Nixon's visit must drive the State of Emergency off the national headlines. But no, with a fine sense of priorities I was permitted to go on record announcing my belief that the proclamation was illegal, not being within the genus of natural disaster so as to come within defined head of power. I added that

none would challenge the assumption of power since sec. 26 of the same Act provided that such proclamation, on being published in the Government Gazette, "shall have the same effect as if enacted in this Act . . . and shall not be questioned in any proceedings whatsoever." I was to be proved wrong on both grounds. A challenge was made, and it was unsuccessful.

One could be forgiven for objecting that, tucked into an obscure Act of Parliament which, according to its preamble, was aimed at providing "for better co-ordination and utilisation of transport facilities within the State and for other purposes" there was an even more obscure provision giving the widest possible powers to the executive, apparently without limit as to what constitutes a threat to peace order and good government.

Events were to move swiftly from this point, and well beyond the limited objectives claimed by each of the combatants. The government made much political mileage out of the situation and, by plugging "law and order", picked up a couple of by-elections on the way. Professor Zelman Cowen made a speech, and a very good one, in which he suggested that "civility is a great virtue". But the tempo had moved beyond civility; it was like telling a bunch of cannibals that missionaries should only be eaten with a knife and fork. Whilst restraint was being preached at St. Lucia, demonstrations were mounting outside the Springbok's city hotel, where numbers were rising as were the tempers on both sides. Arrests were made and some students required treatment at the casualty section of two public hospitals. A few Florence Nightingales from the university did the rounds of the watchhouse and outpatients looking for wounded veterans, but without success. The cry of "police brutality" was banded about - apparently not without justification. Many students decided to go on strike, intending to boycott lectures or else demand that lecture time be spent discussing such issues as apartheid and such "related" issues, as aboriginal welfare and the Torres Straights Islanders Act. A more militant minority took over the students Union and successfully defied a court injunction taken out by the Union aided and abetted by the university administration. Meanwhile, the Springboks went ahead in their preparations, amidst glorious sunshine, on the nationalised



Dr. Gerber

exhibition grounds, for what was to prove to be total victory against all comers. They set off for Toowoomba where they proceeded to prove a number of things: - a. that they were excellent footballers, b. that the local police appeared to be totally indifferent to breaches of the peace - provided they were committed against demonstrators, and c. that an Australian football audience has a killer instinct when attending football matches. They were as unmoved by the social issues and the fate of the martyrs as were the early Romans; what price the Sermon on the Mount when there were hungry lions to be fed?

It is legitimate to ask now, with hindsight, whether all the efforts of the demonstrators, all the pain and humiliation, the arrests and trials was worth it. I think the answer must be a qualified "yes". True, they did not stop the tour, but they did stop the South African cricket team from coming - a team selected not on merit but on race. There can now be no doubt that it was solely and exclusively the result of these demonstrations which persuaded a very reluctant government and Cricket Control Board to cancel that tour. And that, like 1066, is a good thing. This surely must be another nail in the coffin of apartheid, and anything that puts the spotlight on this barbaric form of discrimination is good; one may not applaud some of the methods adopted by some of the demonstrators, but one must applaud their courage. Shock therapy was needed in the face of public indifference and governmental apathy.

There is a seamier side to all this. Events have shown how easy it was for shrewd agitators to manipulate a large, mindless corpus of the student body for political ends. The purity of motives of some of the leaders of this palace revolution must be questioned. With the notable exception of Mr. Dan O'Neill, one looked in vain for them in the thick of the fray. It is surely legitimate to ask why, if they were swayed by altruism and good citizenship, they did not organise something similar in the face of the much greater threat of the French nuclear tests nearer home. Where were the 'pot-stirrers' when it was

legitimate to cry 'death before dishonour'? The police gave a public display of private dissension within their ranks, and many of the constabulary displayed, in the face of admitted provocation, little of the cool, dispassionate impartiality and restraint expected of those whose it is to uphold law - brutality and bashing demonstrators is not yet on the statute book. The government clearly over-reacted in panic and drew on reserve powers which it clearly ought to have, but resorted to only in the face of the clearest threat to peace order and good government.

It is not therefore surprising that when a government expects civil war, the central issues tend to become a little blurred, and much is forgiven in the face of imminent "danger". If the events of twelve months ago prove anything, it is that God still remains on the side of the big battalions, but that in this type of crusade, there are no winners.

P. GERBER

anarchist?

King's College.
20th June, 1972.

Dear Sir,

While not denying or being insensitive to the issues raised by Peter Overlack in the article "Can a Christian be an anarchist?" (Semper 19.6.72) I feel I must point out certain shortcomings in his use of Biblical quotations. In his first (Ephesians 6:12) he completely misunderstands St. Paul by quoting out of context. Here St. Paul is affirming, rather than denying, that the Christian's real enemies are spiritual ones not just earthly ones. St. Paul says "we are not contending against flesh and blood" but Mr. Overlack seems to justify the Christian's fight against "flesh and blood" - the existing authorities.

In another place St. Paul says: "Let everyone be subject to the governing authorities. For there is no authority except from God, and those that exist

have been instituted by God" (Romans 13:1). In case Mr. Overlack brings to my attention Acts 5:29 - "But Peter and the apostles answered, We must obey God rather than men" - let me also explain that this was in a matter of religious authority and not civil authority. Also in the same tone is 1 Peter 2:13-17 where the concept of being subject to state authorities is placed in apposition to the concept of Christian freedom (which is a freedom carrying very heavy responsibilities: see also Galatians 5:13-15).

The other quote is from Galatians 2:21 - "If righteousness comes by the law, then Christ is dead in vain" - has been used in the wrong sense. In this passage Paul is speaking of the ground upon which a man may be perfect - or righteous - before God. The law to which he refers is the old Jewish law, which if properly kept would make a man perfect before God; but Paul points out that "the scripture consigns all things to sin" (Gal 3:22), i.e., no man is morally capable of fulfilling the law. He goes

on to say that the only ground of the Christian's acceptance with God is faith in Jesus Christ, whose death was atonement for sin, and who was raised so that he can now be a mediator between God and men. Paul is not talking about the civil law as Mr. Overlack seems to think and to quote this passage (and the others) to justify the Christian's opposition to legally constituted authority is to do great dishonour to the Bible.

As I said at the beginning I am not insensitive to the issues in society which Mr. Overlack describes and find myself having to make my Christian response to them. All I ask is that Mr. Overlack in particular, and all who use the Bible in general, do not superimpose meanings and connotations onto the text which cannot be allowed by the context. The Bible is, among other things, a collection of writings and must be treated with literary integrity just as any other piece of writing would be treated in a University.

Your's sincerely,
(David Secomb).

YOUR DEGREE

What's your degree going to look like? Ever stop to wonder? It's time we all did. This University used to have a rather impressive looking degree form, not too elaborate but certainly impressive. Now the standard form looks sparse and completely UNimpressive. It is larger than the old form and having less words on it, looks even larger.

Do you care? Some don't. "As long as it says I'm a Vet," said one chap. "As long as it gets me a job," said an Engineering student. Well it will say you're a Dentist or a Geologist or that you've done something called Arts and that's about all it will say and in not many more words.

Yes, it will get you a job and if this University has become a degree factory so that lots of people can push forth and get jobs then the current degree form is adequate, quite adequate.

After you've got your job what will you do with your degree? Doctors, Dentists and Solicitors used to frame them and hang them in their consulting rooms to impress people. Other graduates used to hang them in their office of work, their study, or living room at home. The general idea seemed to be to hang it somewhere as opposed to stuffing it in a drawer. Where will you hang yours? The kitchen might be a good place. You could use all that white space for reminder notes.

What's wrong with the degree form? First a point of information. There is a standard form for all courses with the only difference being Bachelor of Commerce or Bachelor of Science or Bachelor of Whatever. That seems reasonable. Now, consider the professions. In many professions after one takes one's degree one must register with the respective state board of registration before one can practice. This applies in such professions as Medicine, Dentistry,

Pharmacy, Veterinary Science and others. The Queensland Veterinary Surgeons' Board Certificate of Registration form is far more impressive looking than the University's degree form.

The N. S. W. Registration Certificate beats our degree form too. The Western Australian one looks like a dog licence but that doesn't weaken the argument. Quite likely similar remarks could be made in other professional spheres.

What else looks more impressive than the degree form? Practically any form in use by this University including the parking fine form, in which, let me remark, the wording is a masterpiece.

What specifically is wrong with our degree form? To list the major points:-

- * Too much white space
- * The wrong choice of type letters.
- * The wrong size of some of the printing. For instance, "University of Queensland" is too small.
- * The layout is bad.
- * Once there was some scroll work and other embellishment. Now there is none.

The graduate's name is typed on with an ordinary looking large type typewriter. Once names were hand styled in copperplate. This took time and the increased number of students graduating precludes hand styling of names because of the time taken. Fair enough. But why not have the names typed in Gothic or some other distinctive type?

Some of you are going to want to take your degree overseas in search of jobs or in search of further study. How will your degree compare with those from other Universities? Everyone seems to know that it is not the appearance of your degree which will get you accepted or rejected overseas but rather the standing this University has in whichever country you're in, but just the same, wouldn't you prefer something which looks

better than ours does?

Do you care enough to try to get the form changed? The Administration has resisted suggestions for a change and suggestions have been made by more than one small group. I was told that it would be necessary to show that a majority of students want a change. Now, how am I going to do that? I was also told I would have to show fairly precisely what the majority of students want the degree form to look like. Again, how am I going to do that? Further, I was told I would have to convince the administration that any proposed new form would have to be so readily acceptable to students that no group would be likely to seek another change in a couple of years' time.

Can I do that? No. But you could!

Joseph Russell
Vet Science V

HEY YOU!!!

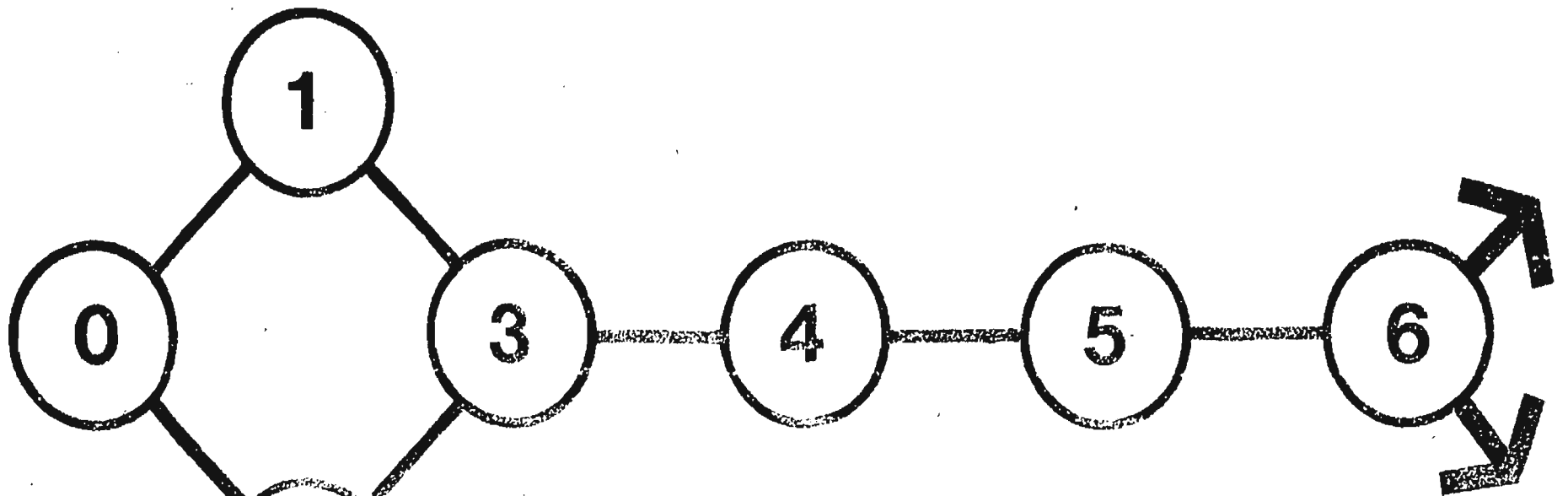
Did you know that this was the 2nd last issue of SEMPER FLOREAT (that great metropolitan newspaper) for the year of 1973. We'll it isn't. It's the 2nd last for the year of 1972. So all you budding journalists out there in scandal world let your pens run dry as you inform your newspaper of what's happening. The last issue will be out when its out (typical of Tully isn't it) but THE COPY DEADLINE (even for official ASIO and Special Branch Notices) is October 15. Bye, Bye. (Miss American Pie.) P.S. Dont try buying any ASIO Acts of 1956 from the sub-treasury....I bought the lot.

PAUL G (for G) TULLY

methodological critique

FIG 1.1

THE NATURE OF THE PLANNING PROCESS



On August 31st Union Council carried the following motion:

"that the Unions attitude to the University's master plan be—

(b) that given its inability to state future goals and objectives the Senate must co-ordinate a University-wide examination, by all the University community, of our future academic structure, and—

(c) that in the interim this University operates on a divergent planning system whereby all development must be consistent with each of the alternative systems.

One of the most important reasons for the "many unrelated and inconsistent developments" on this site has been the lack of adequate long term planning.

"It would appear that in recent years the only committal to future planning was that required by the Australian Universities Commission. The limitation of the A.U.C. submission as a planning brief is that it is only a calculated projection three years ahead of the previous triennium and therefore only allocates priorities for building accommodation within stipulated financial limits. On this basis it is not a true expression of long term planning needs".

(Site Planning Report No. 1, 1972)

Unfortunately, even when the University Architect attempted a long term Master Plan he made a basic methodological error.

Considering the situation on this campus where the Senate is either unwilling or unable to provide Step 1, it is normal procedure to undertake a divergent search. An examination of the following quote will show its relevance to this University's existens and future problems.

DIVERGENCE

This term refers to the act of extending the boundary of a design situation so as to have a large enough, and fruitful enough, search space in which to seek a solution. The chief characteristics of divergent search are as follows.

- The objectives are unstable and tentative.
- The problem boundary is unstable and undefined.
- Evaluation is deferred: nothing is disregarded if it seems to be relevant to the problem however much it may conflict with anything else.
- The sponsor's brief is treated as a starting point for investigation and is expected to be revised, or evolved, during divergent search, and possibly at later stages as well (but not without the sponsor's agreement).

(e) The aim of the designers is to deliberately increase their uncertainty, to rid themselves of preconceived solutions, and to reprogramme their brains with a mass of information that is thought to be relevant.

(f) One objective of research carried out at this stage is to test the sensitivity of such important elements as sponsors, users, markets, producers, etc., to the consequences of shifting the objectives and problem boundaries in many directions and to varying degrees. The directions in which such sensitivities are explored may depend very much on what inconsistencies and conflicts are found to be present in the existing situation.

It may be useful to think of divergent search as being a testing for stability, or instability, in everything connected with the problem; an attempt to discover what, in the hierarchy of community values, systems, products and components (and also in the minds of those who will take critical decisions) is susceptible to change and what are to be regarded as fixed points of reference.

From Design Methods by J.C. Jones

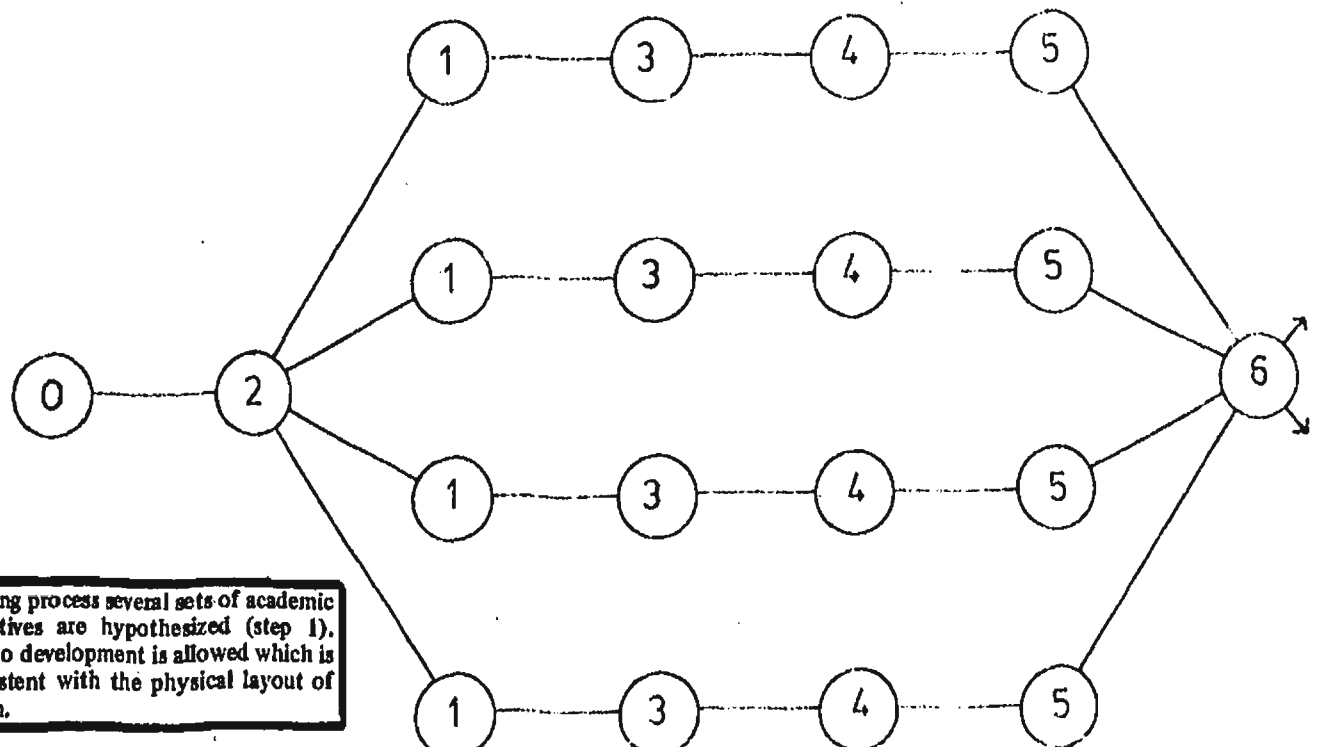
In this context and given long period of time necessary to establish a comprehensive statement of goals and objectives it would have been preferable to use the planning process outlined below:

- Problems of growth and change exist in a system and the decision to plan is made.
- Goals and objectives are formulated, leading to a statement of principles upon which the plan must be based.
- A survey of existing conditions is undertaken to provide data on all constraints which will bear upon the application of the preliminary principles.
- By applying principles to data, a range of solutions is generated and the choice of a preferred solution is made.
- A 'master plan' illustrating the preferred solution is prepared.
- Implementation of this master plan is put in hand over a certain time scale.
- Periodic review of progress in the light of changing circumstances reveals the effects of the plan upon the system and the cycle repeats.

1.06.

As the University stands today it has not sufficient long range predictions. The time has now come when the University should carefully consider its population growth, the faculty and dept. structure, the extent of likely change in academic teaching methods and equipment, estimate the pattern of expansion or contraction of departments, and trends in post-graduate study and research. All are questions which affect the nature and extent of growth of the University campus. On the experience of other Universities

such questions can only be adequately answered by the completion of an academic planning report which would form the basis of a physical planning brief.



carparks for 1984?



Having considered the recommendations of Site Planning Report No. 2 and Wilbur Smith and Associates Traffic Circulation and Parking Study (University of Queensland 1972) Union Council submits as follows:

OBJECTIONS:

- 1) This Council deplores the simplistic solution offered by Wilbur Smith and Associates to envisaged transportation problems. Council firmly believes that alternate solutions must be implemented.
- 2) Union Council objects most strongly to any proposal whatsoever to build multi-level or underground car parks on the St. Lucia Site.
- 3) Union Council objects to misleading suggestions that AUC will subsidize the cost of carparking structures proposed for this University. AUC Fifth Report (May 1972) explicitly states that such subsidies would be available to two Universities to quote (p 150).

Some of the Universities in city areas are now facing special difficulties with respect to parking. Those most serious affected are the Universities in Sydney, Melbourne and Adelaide... The Commission considers that some assistance is necessary for those Universities which are obliged to build parking structures.

Queensland University with a campus of 228 acres can by no means fit into a pattern of being obliged to build a structure for parking purposes.

RECOMMENDATIONS:

- 1) Union Council recommends that Senate order a complete review of all alternate solutions to envisaged transportation and parking problems. Such a review should consider not only the feasibility and effectiveness of proposed solutions but should also consider the effect of proposed solutions on the University and outside community, and the St. Lucia environment. The University can best be served if such a review is conducted before any set recommendations affect a community who has not been extensively consulted.
- 2) Union Council recommends that the Senate decide, as a principle for the planning of the physical development of the St. Lucia Site, that only surface car parking be made available on the St. Lucia Site, and that this surface parking be generally restricted to the areas proposed as parking areas in Site Planning Report No. 2, 1972.
- 3) Union Council considers necessary and recommends that the Senate instruct the University Architect to undertake comprehensive noise and air pollution tests on the University Site, and to prepare a report on expected air and noise pollution levels that would result if proposed developments were adopted.

RECOMMENDATIONS FOR INTERIM MEASURES TO OVERCOME PRESENT PROBLEM OF PARKING ON CAMPUS:

- 1) that the present problem be recognized as a peaking problem accentuated by drivers bringing only themselves to the St. Lucia Site. Such a problem can be tackled by charging a parking fee for single drivers at these periods.
- 2) that the Senate instruct the Administration to take all possible measures to facilitate the pooling of cars coming to the St. Lucia Site.
- 3) that the Senate instruct the Administration to publicly support hitchhiking to and from the St. Lucia Site and instruct the Administration to negotiate with the Brisbane City Council with the intention of having hitching posts established throughout the City.
- 4) that the Senate encourage the use of motor cycles and bicycles by instructing the Administration to allow special parking positions for motor cycles in favoured positions and to place bicycles racks around the St. Lucia Site.

EXPLANATION OF OBJECTIONS: SHORTCOMINGS OF THE WILBUR SMITH REPORT:

Comment on Methodology Employed by Wilbur Smith:

a) SCOPE. The study is essentially a parking study. A study as to how a given number of cars could be accommodated. The responsibility for the narrow scope of the Report must ultimately fall upon the Senate who gave Wilbur Smith his brief.

"The study was to assess existing traffic and parking requirements, to determine likely future traffic and parking needs, and to recommend plans for immediate, interim and long term traffic and parking development."

Nowhere in the report are recommendations that would attempt to alter the existing travel modes of staff and students. The staging of the proposals are unrealistic. The study was constrained by funds available in the immediate and interim stages, but funds were assumed to be adequate for the ultimate stage. The unreality becomes apparent when it is pointed out that parking structures are all to be provided in the ultimate stage.

b) TYPE OF SOLUTION. The study proposes an engineering 'style' solution to the problem. The solution proposed is that, assuming that parking demands are going to increase, the only solution is to provide more parking spaces. Further, the amount of land available for surface parking is limited, so the only solution is to park the cars underground or in multi-level structures. Many people have been critical of various Wilbur Smith proposals. The Economics Department of this University, (see *Economic Analysis and Policy* Vol. 2 No. 1, March 1971, A Critique of Brisbane's Transportation Studies' by L.A. Duhs, H.M. Kolsen, and G.E. Docwra) have been most critical of the two studies carried out in Brisbane. Yet Wilbur Smith was given the job for the University. The provision of special (privileged) parking spaces for bicycles and cycles should all be investigated, be given to students, and the pooling of cars would be facilitated.

The lack of alternative proposals that differ conceptually from the ones offered is disquieting. How can a rational decision about the space/parking requirements of the University be made if only one 'style' of solution is put forward? Further, there was not any rigorous evaluation of that style of proposal either by Wilbur Smith in his report or by the University Architect. A number of solutions are always available for any problem.

c) INTERDEPENDENCE OF PUBLIC AND PRIVATE TRANSPORT. The interdependence of public and private transport is not made clear in this Report. One of the far reaching defects on the Brisbane transportation system was that the reports of 1965² and 1970³ considered public and private as separate modes and did not integrate the two modes. A decline in the utilization of public transport and thus an increase in the utilization of private transport (given the same frequency of movement by individual commuters) will increase congestion on the roads. At present congestion is not treated as a cost by the private motorist (i.e. he does not directly pay) even though every additional car introduced into the system imposes a time loss on all other road users.

The decline in utilization of public transport reduces the revenue derived from its operation and will increase the deficit. Attempts to reduce the costs by either reduction of quality of service or by fare increases further decreases the attractiveness of public transport and patronage falls again. A solution that proposes the increase in both the quality and quantity of parking will by definition compound the problems of public transport.

d) DEMAND GENERATED BY SUPPLY OF NEW PARKING SPACES. A solution that proposes an increased supply of parking facilities will only attract more people to use their cars. The problem at present is limited only by the number of convenient spaces. If the number of spaces is increased to cater for a rise in numbers of cars (due to population increases) it is most likely that demand will exceed supply, given the existing reservoir of untapped supply of cars.

The expansion of facilities for private transport without relating costs to the individual motorist causes the decline of public transport which causes increased utilization of private transport and the need for increased road and parking facilities.

e) Need to Survey Transport Requirements. This interdependence was not considered when projections were made as to the number of spaces needed. Nor was any attempt made to survey why private transport is so attractive. This and other information such as at what price (for parking) would a car driver be prepared to change modes and use public transport. Without

information of the type mentioned above, predictions as to future parking needs may deviate from the actual figure. Especially in this regard unit parking demands for students will rise 16% while the student population will rise 34%. Any increase over 16% would require further provision of parking spaces. For this reason alone provision of parking spaces is a short-run solution.

Wilbur Smith states the solution on page 15, section 3.9.:

"every effort should be made to promote public transport use and so reduce the demand for parking space and the use of road facilities".



EXPLANATION OF POLICY: REASONS FOR OBJECTION TO PROPOSED MULTI-LEVEL AND UNDERGROUND CAR PARKS: The reasons for this objection are as follows:

- i) The financing of the proposed car parks would, result in considerably more problems than indicated by the Wilbur Smith Report, and would place a considerable financial burden upon students wishing to park on campus.
- ii) The particular location of at least one of the proposed car parks would have a most unfortunate effect upon the immediate environment.
- iii) The proposals for these car parks does not seriously consider the effect of increased traffic upon the routes to the University, or seriously consider the responsibility of the University to an outside community threatened by pollution and congestion.

The reasons are explained in detail below:

Costing of Car Parks:

i) It should not be assumed that any comprehensive costings have been done either by Wilbur Smith or by University Architect's Office on the proposed car parks. The extent of such costings are indicated in a letter from the Vice-Chancellor's office: (ref ACV 41/72/126 p3).

"No detailed costings have been undertaken on the multi-level or underground parking stations proposed. Wilbur Smith and Associates for their proposals (since modified as indicated above) use cost estimates based on actual cost incurred in areas in recent years of:

- paved surface areas \$130 each
- paved surface involving extensive earthworks \$150 each
- single-decked parking structures \$1,200 each
- multi-deck parking structures \$1,500 each
- underground parking \$2,000 each

The cost of multi-level underground car parks proposed in Site Planning Report No. 2 is, based on these figures, as follows:

- One 1,200 car parking structure south of the New Chemistry Building: \$1.8 M
- One 1,500 car parking structure below the Schonell Theatre adjacent to Oval 4: \$1.8 M
- A potential 300 space underground car park in front of Forgan Smith Building: \$600,000

TOTAL = \$4.2 M

Furthermore, given current inflationary trends, these figures will be very much increased by 1976 and later.

- ii) In assessing the feasibility of the proposals consideration must be given to the possible inaccuracies of such costings. It has been suggested by one firm consulted that the above costs are an accurate present estimate. However, another costing placed the cost at above \$9 M.
- iii) Wilbur Smith proposes that students be charged a parking fee at the rate of \$30 per year and staff at the rate of \$50 per year to finance this scheme. No consideration whatsoever has been given to the effect of such a financial burden being placed on students without a real

it is assumed that patronisation of these structures will be at capacity levels.

iv) The raising of such funds will, it is believed, involve considerable difficulties and involve the University in embarrassing public controversy. The only way, at present, by which the University could raise finance for such a project is by an independent loan. Special permission would have to be given for such a project by the State Government.

Already, comment from both the University and outside community (see petition from St. Lucia residents) indicate that considerable pressure would be mounted to stop permission being given. Such a public display would not, it is suggested, be in the best interests of the University.

v) Furthermore, approval of multi-million dollar expenditure on car parking structures by a University which only recently expressed disappointment over the amount of funds provided by the Federal Government could hardly be expected to win widespread public sympathy. In fact, it is suggested such expenditure would bring the good name of the University into disrepute.

Effect of Proposed Car Parking Structures on Environment: The two multi-level structures would have the dubious honour of being the two largest buildings on campus. The University Architect states in Report No. 2:

"Imaginative and sensitive design will be required to incorporate these provisions (parking structures) into the fabric and landscape of the campus". (7.04.08)

No multi-level car parking structure of the size proposed could be incorporated in an aesthetically pleasing way into the University Plan by "sensitive and imaginative design".

Structure Proposed: The proposed 1,500 car parking structure below Schonell Theatre adjacent to Oval No. 4, for example, would have a most unfortunate effect upon the immediate environment, especially on the following:

- i) The Swimming Pool: It is difficult to indicate the exact visual effect of such a structure immediately adjacent to the pool (at present in a comparatively pleasant setting) as perspective incorporating the pool has been made available. This effect could be most unpleasant, and the noise from cars using such a massive car park would, to a considerable extent, destroy the enjoyment of using this swimming pool.
- ii) Oval No. 4: Despite reassurances of the Sketch provided, and a suggestion that the proposed structure could double as a grandstand, it is believed that such a structure would destroy what is now a pleasant oval and open area. Again, it is very difficult to quantitatively assess such an impact, but some indication is given by again pointing out that the proposed structure, which will be quite massive, would be by far the biggest single building on the St. Lucia Site.



Effect of increased Traffic on surrounding community: No consideration has been given to the effect of increased volume of traffic on those living near the main routes to the University St. Lucia Site, or on the traffic problems of the city of Brisbane, or on the motorists coming to the St. Lucia Site during peak hour. The proposed car park structures plan for an increase in traffic without investigating manners in which the traffic volumes can be reduced or levelled. It is not suggested for a moment that the University community can alone deal with the considerable problem of urban transport, but it is suggested that it is most unwise to deliberately adopt a policy which will make for a worsening of present problems of pollution without giving very serious consideration to alternatives. Any increase in the present volume of traffic would increase the noise level along main routes to the campus. Yet even now residents are disturbed by the noise and danger created by the traffic.

An increase of over 1,100 vehicles from all parts of Brisbane to the University would, furthermore, only worsen the already considerable problem of Brisbane peak hour traffic.

RECOMMENDATIONS EXPLAINED:

First Recommendation: That the Senate order a complete review of all alternative solutions to envisaged transportation and parking problems, effectively consulting those affected, and evaluating proposals with reference to the criteria differing from those previously employed.

Probably the most disturbing aspect of the Wilbur Smith and Site Planning Report No. 2 proposals is that at no stage before the completion of the Reports was any attempt made to consult those who would be affected by their implementation. Even more serious is the fact that even at this stage the University community has not been effectively consulted about such matters.

Nevertheless, Union Council firmly believes that the objections listed above, and the alternative solutions listed below are sufficient reason for a complete review of the problem.

Any brief which Senate prepares for such a review should, in the opinion of Union Council, be formulated only after calling for submissions on the terms of such a brief, and should include such considerations as have been outlined in this submission.



Second Recommendation: That only limited car parking be made available on the St. Lucia Site, and that this surface parking be generally restricted to the areas proposed as parking areas in Site Planning Report No. 2.

The reason for this recommendation will be quite obvious to those who have read the details of Site Planning Reports 1 and 2. Other open spaces which might seem suitable for the parking of cars — for example, sporting ovals, areas near the river, areas near the lake — and are without any doubt whatsoever, areas which must be preserved in their present form.

It is simply a hard fact that, unless one is willing to despoil the University environment, there is very little space available for car parking. There appears to be a strong desire, among the entire University community, to preserve the many pleasant aspects of the St. Lucia Site.

As has been made quite clear in the previous section, it would be most regrettable if it was decided to build multi-level car parks. However, if the above recommendations were endorsed, there would still be provision made for a considerable number of cars in the following areas:

- Surface parking areas to accommodate 1,000 cars, off Sir Fred Schonell Drive, below the Hartley Teakle (Agriculture and Entomology).
- Retention of limited parking in certain access roads and along Sir William McGregor Drive to provide about 200 spaces.
- Retention of surface parking in areas of proposed multi-level structure south of the new Chemistry building to provide about 300 spaces.
- Careful consideration could, if it suggested, be given to providing landscaped surface parking on the area proposed for multi-level park below Schonell Theatre and adjacent to Oval No. 4 to provide about 400 spaces.

This would still provide for approximately 2,000 spaces. Provision of this limited number of parking spaces would create considerable though, it will be suggested below, not unsurmountable problems. However, the creation of such a problem avoids a much worse consequence (listed above) of multi-level and underground car parks or of despoiling the total University environment.

Third Recommendation: That the Senate instruct the University Architect to undertake comprehensive noise and air pollution tests....

A most disturbing aspect of Site Planning Report No. 1 is that no air and noise pollution tests were made on campus to quote letter from Assistant Vice-Chancellor's office (ACV 41/72/126 p3) "Noise and air pollution tests have not been undertaken". No attempts were made to discover, what effect the 1,500 space car park would have upon the carbon-monoxide levels on Oval No. 4, or what effect the 1,200 space car park would have on the University Kindergarten. Without attempting to dramatise such considerations, it is quite obvious that these are factors which must influence any decisions concerning the future physical development of the Site.

Expected noise pollution levels have not been indicated, despite their obvious importance to an academic community. There seems to be a complete lack of awareness that noise created either by the construction of new buildings or by traffic on adjacent roadways has caused considerable problems both for lectures and tutorials, and for individual academics. During the

last year, for example some lectures were abandoned because of noise from building construction immediately outside. Even the proposed system of limited access routes for delivery vehicles and buses could, it is suggested, result in considerably more disturbance than one would imagine from a reading of the proposed plan.



TYPES OF ALTERNATIVES THAT SHOULD BE CONSIDERED: Union Council reiterates its opinion that alternative solutions must be extensively reviewed. The types of solutions that should be examined are listed below:

- River Transport:** Despite the fact that the University is "surrounded by water" on three sides, no consideration is given to the feasibility of a ferry service from various suburbs (e.g. Ipswich, Jindalee, Hamilton).
- Bicycles and Motor Cycles:** Encouragement of bicycles and motor cycles especially for those in nearby suburbs. The possibilities of the University acquiring such machines at wholesale prices for sale to University community; of the University negotiating with Brisbane city for special bicycle lanes on, say, the Schonell Drive; the provision of special (privilege) parking spaces for bicycles and cycles should all be investigated.
- Feeder Bus Services:** The Wilbur Smith proposal acknowledges that the population densities in suburbs adjacent to St. Lucia are high. It was not effectively demonstrated that a feeder bus service running at peak hour during these hours could not effectively reduce traffic volume.

4. The "DO NOTHING" Solution: It could be said that this is "no solution" and would result in people parking in adjacent suburbs. Both objections are demonstratively false. Clearly a decision not to cater for parking demands would force some people to adopt alternate transport methods, and parking in adjacent suburbs would result in "no parking" signs like those between the University and the St. Lucia shopping village.

5. **Public Transport:** No consideration has been given in Wilbur Smith to the possibility of a University subsidy for public transport users or the effect of such a subsidy.

6. **Hitching:** As will be argued below, increased car occupancy would significantly reduce the volume of traffic and demand for parking. In order to encourage this, the University could publicly declare its support for hitchhiking as a mode of travel. Some steps in this direction have been taken with the hitching post at the corner of Sir Fred Schonell Drive and Mill Road. The Administration should negotiate with the Brisbane City Council for the establishment of such points throughout the city, but with a design less dangerous than the present post.

7. **Car Pooling:** Again, as will be argued below increased car occupancy rate would significantly reduce the volume of traffic. The Administration should accept a responsibility to facilitate such pooling.

8. **Pricing Solution:** J.E. Ritchie, the Deputy Vice-Chancellor, has stated:

"While not ruling out alternate ways of reducing the flow of vehicles to the Site, the imposition of parking charges is likely to be the most effective means of reducing the demand on the University to provide car parking facilities". (University News, Special Edition, 30th August, 1972, p.3.)

Clearly, however, neither Wilbur Smith or the Site Planning Report No. 2 consider a pricing solution to the parking and transportation problem. The solution proposed by the Deputy Vice-Chancellor (and others) should be thoroughly investigated.

Factors used as criteria for determining an effective pricing scheme could be:-

- size of car
- number of occupants on arrival
- time of arrival
- number of occupants on departure.

Obviously, such criteria are assuming that the charge is a "use-only" fee.

9. **The Walking Solution:** This is not the ridiculous suggestion it might appear to be. Clearly, people from distant suburbs would not be expected to walk, but people in say, a mile radius could be refused permission to park on campus (no stickers granted), or charged high parking fees. Alternately the Senate could take vigorous measures to ensure that many more people could live on or near the campus: that is by adequate low cost student housing.

10. **A Detailed Solution:** Union Council submits that none of the alternatives listed above (or combinations of these alternatives) have been investigated thoroughly, and considers it presumptuous, at this juncture, to state say that any of these alternatives are not feasible solutions. However, it seems to be the case that,

when alternatives like those listed above are suggested, the protagonists of the proposed master plan demand a practical alternative to their proposals with all the details spelt out: Every aspect of the alternative must be spelt out before it is acknowledged that there is a viable alternative to a plan such as the one proposed in Site Planning Report No. 2.

Union Council believes such a demand unreasonable. Nevertheless, the tentative solution detailed below ably demonstrates that there are, in fact, total solutions to the problem that would serve the interests of the University community much better than the structures proposed in Site Planning Report No. 2.

The Merit of the plan that will be detailed below is that it can be readily demonstrated that it is a very practical scheme. The scheme proposes a pricing solution endorsed in principle by the Deputy Vice-Chancellor (in the quote above) and by members of the Economics Department who have taken a particular interest in Urban transportation problems. There seems little doubt that, were the Senate to adopt such a scheme, it would work. Furthermore, despite the fact that it would involve parking fees — in fact quite heavy fees for some individual drivers — the cost to the University community would be minimal.

The Scheme Outlined: According to the Wilbur Smith report, University can expect a demand, by 1981, for 5,200 car spaces, with an average of 1.5 people in each car (calculated from Wilbur Smith Table 1 p.12 and Table 6 p.20). Now clearly if all cars coming to the campus were filled up with, say, three people in each car, then there would only be a need for 2,600 car spaces. If there were four people in each car, there would only be need for 2,000 spaces or about the number that could readily be provided by surface car parking.



But how? The answer is quite simple. Charge so that a person is greatly encouraged to bring four people in his car. The charge could be along the following lines:

- 1 person in vehicle, fee, say, \$1.00 a day
- 2 persons in vehicle, fee, say, \$0.80 a day
- 3 persons in vehicle, fee, say, \$0.50 a day
- 4 persons in vehicle, fee, say, \$0.00 a day

This is only a suggested basis for charging. The University would have to find its own equilibrium: clearly there would be a level of charging at which enough motorists would decide to bring passengers, and the prices could be maintained at that level.

How to Make the Scheme Work:

- In order to further cope with the problem, monies collected should be used to subsidize public transport and thus further encourage the reduction of traffic volume. Again the actual details of subsidies would have to be worked out, but such calculations would not, it is suggested, prove overly difficult.
- The University Administration would encourage the pooling of cars; in order to implement this, the Administration would provide for a section on enrolment forms as follows:

Address:
Do you want to:
i) Give a lift Yes No
ii) Accept a lift Yes No
iii) Either Yes No

Times of travel to and from St. Lucia Site:

The Administration would strongly urge students and staff to complete such a form. Such a form would be tabulated by computer. Address, phone no. and other details of nearby residents wanting or offering lifts to the St. Lucia Site could then be given to students, and the pooling of cars would be facilitated.

ii) The University Administration would encourage hitchhiking; although this proposal may seem unusual to some, it is in fact, a very rational proposal. The Administration would, for example, through its Public Relations section, urge that hitchhiking be accepted by the community as a way of dealing with a community problem, namely, the congestion of roads and air and noise pollution.

Objections to such a Scheme Refuted: The most likely objections to the scheme would, most likely, fall into two categories.

- "The scheme is impractical"
- "The scheme wouldn't be fair"

Is the Scheme Impractical? Objections such as the following could be raised:

- "The method of charging wouldn't achieve its aim, namely, to reduce the volume of traffic".
* This objection is readily refuted. Clearly, if the parking fees were raised to a high enough level, then people would find it worthwhile either to arrange lifts or use the (now subsidised) public transport.

ii) "The collecting of parking fees in the manner outlined would be too expensive, impossible to police and too slow."

* This assertion is at odds with the facts of the situation. In fact, the collecting of parking fees would be a relatively simple matter; it would be little different, for example, to the collecting of fees at a toll bridge, or at a "drive-in" picture theatre, and in these situations the collection of fees does — we all know — occur without great difficulties. The collecting of fees, furthermore, would not require additional staff for already the University employs quite a large staff to police such traffic as is on the St. Lucia Site.

iii) This scheme only caters for movement to the campus and could result in people having no means of travelling from the campus.

This could be a problem. If the problem arose it could be overcome by the introduction of pricing on the basis of occupancy rates when leaving the University.

Is the Scheme Unfair? Objections such as the following could be raised:

- "The students and staff would be badly affected by the heavy parking fees envisaged."

* This is true only for motorists who bring only themselves or one passenger. This is unfortunate, but the stated alternative, namely to build multi-level and underground parks would, it has been demonstrated, result in a very high cost to all students. Besides, considering the likely traffic problems, a motorist who exercises his option to drive only himself to the campus, is imposing an inconvenience both upon the University community, which is expected to provide parking spaces, and upon the outside community. Any such individual should, it is suggested, expect to bear the cost of these inconveniences.

ii) "Motorists who wanted to come and go during the day couldn't, even if they initially brought five people to the St. Lucia Site."

* This objection could be readily overcome. A ticket could be issued which would allow the motorist access to the car park during the day.

iii) "It's unfair that an individual motorist should subsidise public transport."

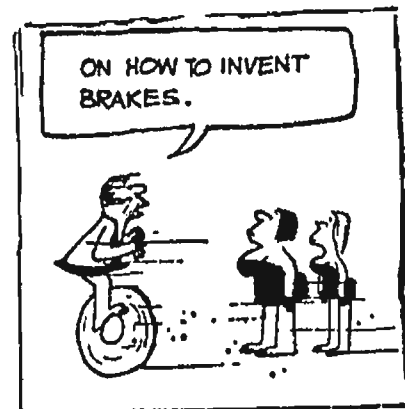
* The Motorist would not, as has been explained, pay any fee when bringing a full passenger load. If this is not done, then it is not unreasonable to expect the motorist to contribute to the cost of solving the problem he is helping to create. Part of this solution is to subsidise public transport.

iv) "All this scheme would do is encourage people now using public transport to hitchhike, because hitchhiking would now be made so easy."

* Considering that part of the scheme involves subsidising public transport, this isn't a very weighty objection. However, even if the fears outlined were realised, it wouldn't make much difference to the scheme, for in fact, only a very small proportion of those coming to the St. Lucia Site, according to the latest figures, use public transport to get there. (See Wilbur Smith, p.12, Table 1.)

v) "The suggested pooling of cars isn't an Administration problem, but is something that should be done by the Union."

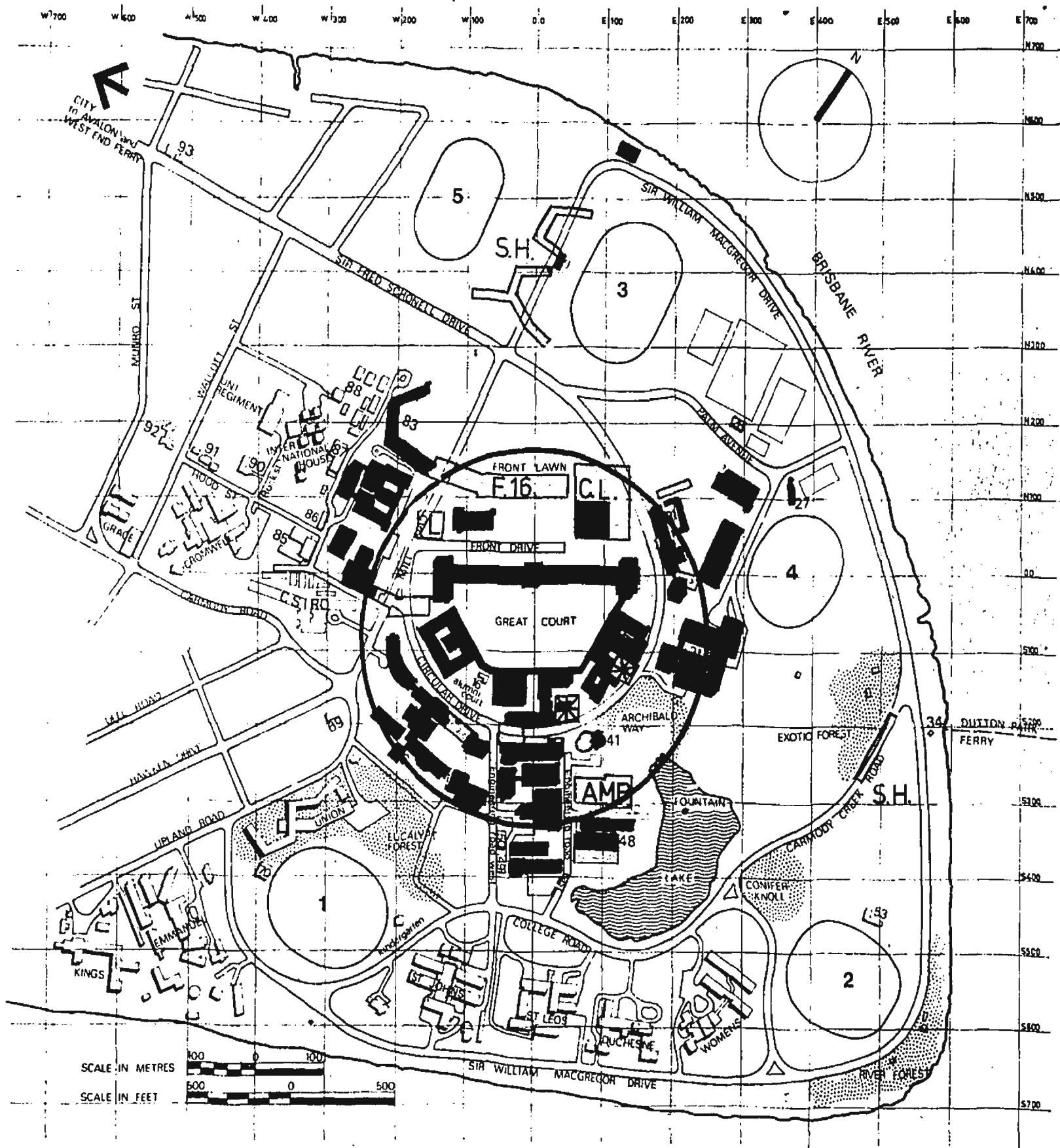
* It must be stressed that the problem is one facing the entire University community, not just the student body. Any suggestion for a disjoint, piecemeal solution would be a most unwise suggestion. Besides, the Union really hasn't the resources for the suggested computerised pooling system by both staff and students.



The alternatives listed above propose rationalisation of existing facilities. All the proposals are flexible and involve a minimum cost to the whole community. Building of multilevel carparks on campus would, on the other hand, impose on irreversible "solution", on the University community, and involve massive expenditure. A commitment to such an irreversible and controversial solution would, in the opinion of Union Council be most unwise.

- Wilbur Smith & Associates. University of Queensland Traffic Circulation and Parking Study, Page 2.
- Brisbane Transportation Study. W.S.
- South East Queensland Brisbane Region Public Transport Study. W.S.

1600 FT. limit Plan



As this site plan illustrates, it is possible to create a high density development within the 1600 ft. limit. If the University decides to accept this limit then it should be able to set an absolute upper limit on its growth.
This seems to be the logical way by which the Senate can advise both State and Federal Governments that this campus cannot expand indefinitely.

SCHEDULE OF ACCOMMODATION

Horizontal extension:	Engineering Structures Lab	9,000
	Mathematics Building	54,000
	Engineering Admin.	22,000
	Engineering Lecture Theatres	22,000
	Staff House	12,000
		119,000
New Buildings:	1970 - 72 triennium	300,000
Future buildings (as shown on plan)	Future Academic (F16)	100,000
	Central Library (C2)	199,000
	Biological Sciences Library (L)	54,000
	Architecture, Music and Planning (AMP)	74,000
	Services Building (S)	18,000
		445,000
TOTAL ADDITIONS TO EXISTING (1,287,000 sq. ft.)		804,000

THIS EDITION
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OFFICIAL NOTICE

*The following Constitution changes will be considered
at the next Meeting of Union Council:*

THAT SECTION 45.4.(b) AND SECTION 45.4.(c) BE DELETED FROM THE CONSTITUTION AND A NEW SECTION 45.4.(b) BE INSERTED IN ITS PLACE, TO READ "POST-GRADUATE STUDENTS' FUND".

THAT SECTION 45.3.(d) OF THE CONSTITUTION BE AMENDED BY THE DELETION OF THE WORD "GENERAL".

THAT SECTIONS 21. AND 49. OF THE CONSTITUTION BE REPEALED AND A NEW SECTION 21. BE ENACTED AS FOLLOWS:

- 21.1. (1) THE ANNUAL GENERAL MEETING OF THE UNION SHALL BE HELD IN OCTOBER EACH YEAR AND WHEN POSSIBLE BEFORE THE EIGHTH DAY OF THAT MONTH.
(2) THE MEETING SHALL RECEIVE SUCH REPORTS AND CONSIDER SUCH OTHER BUSINESS AS SHALL BE SPECIFIED IN THE REGULATIONS.
- 21.2. THE BALANCE SHEET, PROFIT AND LOSS ACCOUNT, AND FINANCIAL REPORT OF THE UNION, AND THE AUDITOR'S REPORT THEREON, SHALL BE PRESENTED BY THE HONORARY TREASURER TO A GENERAL MEETING OF THE UNION TO BE HELD ON OR BEFORE THE FIRST DAY OF MAY EACH YEAR.
- 21.3. EVERY MEMBER OF THE UNION SHALL HAVE THE RIGHT TO SPEAK AND VOTE AT A GENERAL MEETING OF THE UNION.